COASTCOM

COASTCOM
COMPANDOR SHELF with
POWER SUPPLY
for
THE CORPORATION FOR PUBLIC BROADCASTING
COASTCOM JOB # 4051

2312 Stanwell Drive
Concord, California 94520
(415) 825-7500
TWX 910-481-5781

3/18/80 1:00 P.M. E.D.T.

Hi Alan:

All is well with the Coast-Com/dbx unit. I've connected Outputs 1 + 3 to your terminal strip on the wall. Outputs 2 + 4 are yet to be connected to the terminal strip. (per your instruction) The dbx is properly adjusted for a +4 dBm in and out in 600 ohms. The microwave s/c demods are also properly set to produce a +4 dBm output for 0 VU (Program Operating Level.) I'll be available via phone @: 202-785-9330 if you have any questions.

- W. L.

P.S. Please be advised that there is a significant RFI field adjacent to the Farinon

DESCRIPTION	PO NO.	ORDERED FROM	ORDER DATE	PRICE	STATUS BO-BACK ORDERE R-RECIEVE

COASTCOM

WARRANTY and ASSISTANCE

COASTCOM's products are warranted against defects in materials and workmanship for a period of eighteen months from the date of factory shipment or one year from the date of installation, whichever occurs first. COASTCOM will, at its option, repair or replace products which prove to be defective during the warranty period provided they are returned to COASTCOM, and provided the proper operating procedures as listed in the product manual are followed. Repairs necessitated by misuse of the product are not covered by this warranty. No other warranties are expressed or implied.

COASTCOM certifies that this equipment met its published specifications at the time of shipment from the factory. Your equipment should be inspected and tested immediately upon receipt. If the equipment is damaged in any way, or fails to operate properly, file a claim with the carrier and notify us.

For assistance, factory service, or the return of equipment please contact:

COASTCOM
2312 Stanwell Drive
Concord, CA 94520
Phone: 415-825-7500
TWX: 910-481-5781

This Warranty covers equipment shipped by COASTCOM after November 15, 1979.

COASTCOM

SHELF PROFILE

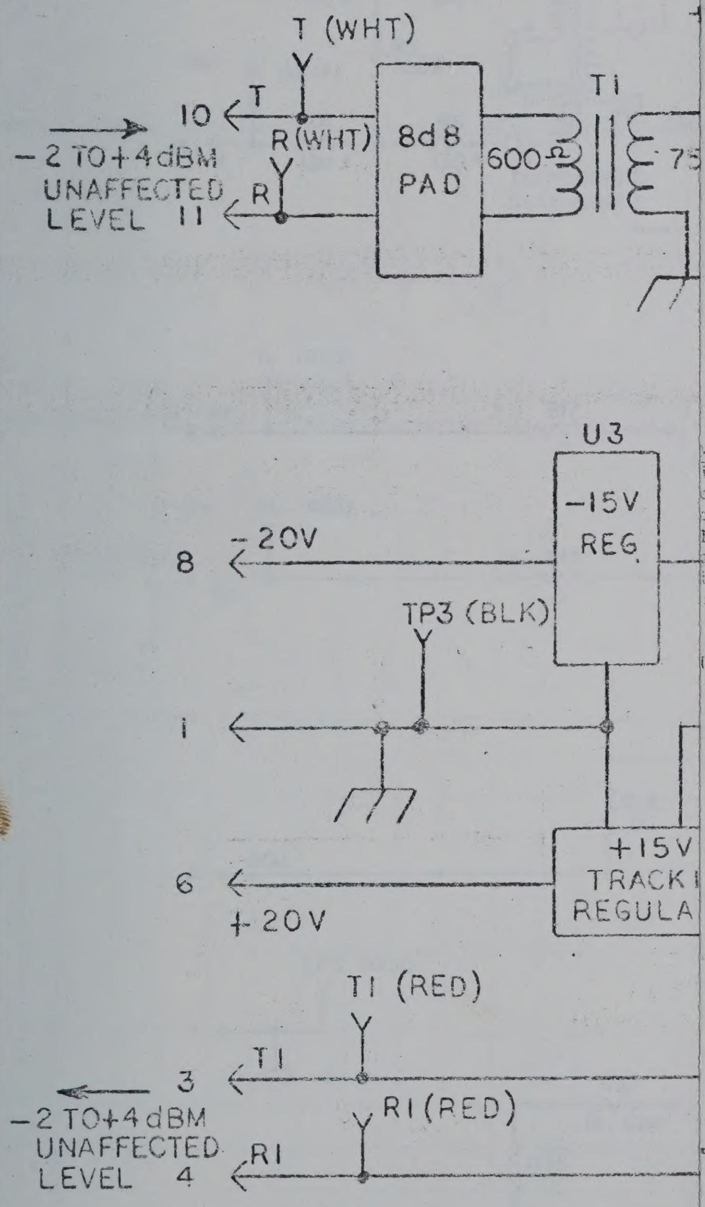
	PA	PA	PA	PA			PS	PS

90900-030

SYMBOL	MODULE	SYMBOL	MODULE
PA	940 Program Amplifier		
PS	90021-002 Power Supply		

TYPE EQUIPMENT	CUSTOMER	JOB ORDER	DATE
Compandor with Power Supply	Corporation for Public Broadcastg.	4051	3/12/80

REVISIONS		
DESCRIPTION	DATE	APPROVED
	3/6/80	gw



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COASTCOM MODEL 940 Program Amplifier

COASTCOM's Model 940 Program amplifier is a simplex, transformer coupled wide band amplifier with subboard option for Compressor, Expander or Equalizer.

The input circuitry consists of an 8 dB balanced pad to limit peak levels in the transformer, a 600 to 75 ohm transformer (T1), and two amplifiers (U1A und U1B) which provide 6 dB to 12.3 dB of gain in the transmit path. A connector jack,(J1) provides input/output and power connections for the optional subboard.

The output amplifier (U2) has a 6 dB gain range and is coupled to the balanced output through a 75 to 600 ohm transformer (T2).

Negative voltage is regulated by an integrated circuit voltage regulator (U3). This device features overcurrent and thermal shutdown to protect other program amplifiers operating from the same supply. Two additional IC's (U4 and U5) are used as a +15 volt tracking regulator to insure that audio performance is not degraded due to power supply tracking errors. Three test points (TP1, 2,3) are provided for circuit alignment.

MENT (using Compandors). In any compressor/expander applica-
itical that the unaffected level (also called focal point) be
compressor input and the expander input. This will insure
cy & level response.
1 kHz test tone at the desired unaffected level. Apply this
gin of the program material (not at the 940 input).
igh-impedance level meter (HP400L or equivalent) between TP1
ust the RX potentiometer to obtain a 2.2 dBm (1 dBv) meter
(Top)
meter between TP2 &TP3. Meter should read the same as step 2.
RX potentiometer for the desired output level.

PERFORMANCE SPECIFICATIONS

Frequency Response		40Hz to 100Hz	+0, -0.5 dB
		100Hz to 15000Hz	+ 0.1 dB
Harmonic Distortion			
	40Hz to 100Hz	≤ 0.5% @ peak pgm level	
	100Hz to 15kHz	≤ 0.3% @ peak pgm level	
Impedance	Input	600 ohm balanced	
	Output	600 ohm balanced	
Levels	Input - Avg Pgm	-2 to +4 (0 dBm0)	
	peak pgm	+14 dBm0	
	Output - Avg Pgm	-2 to +4 (0 dBm0)	
	peak pgm	+14 dBm0 +18 dBm Absolute Level (normally +20 dBm)	

Power ±20Vdc @ 150 mA (including compandor)

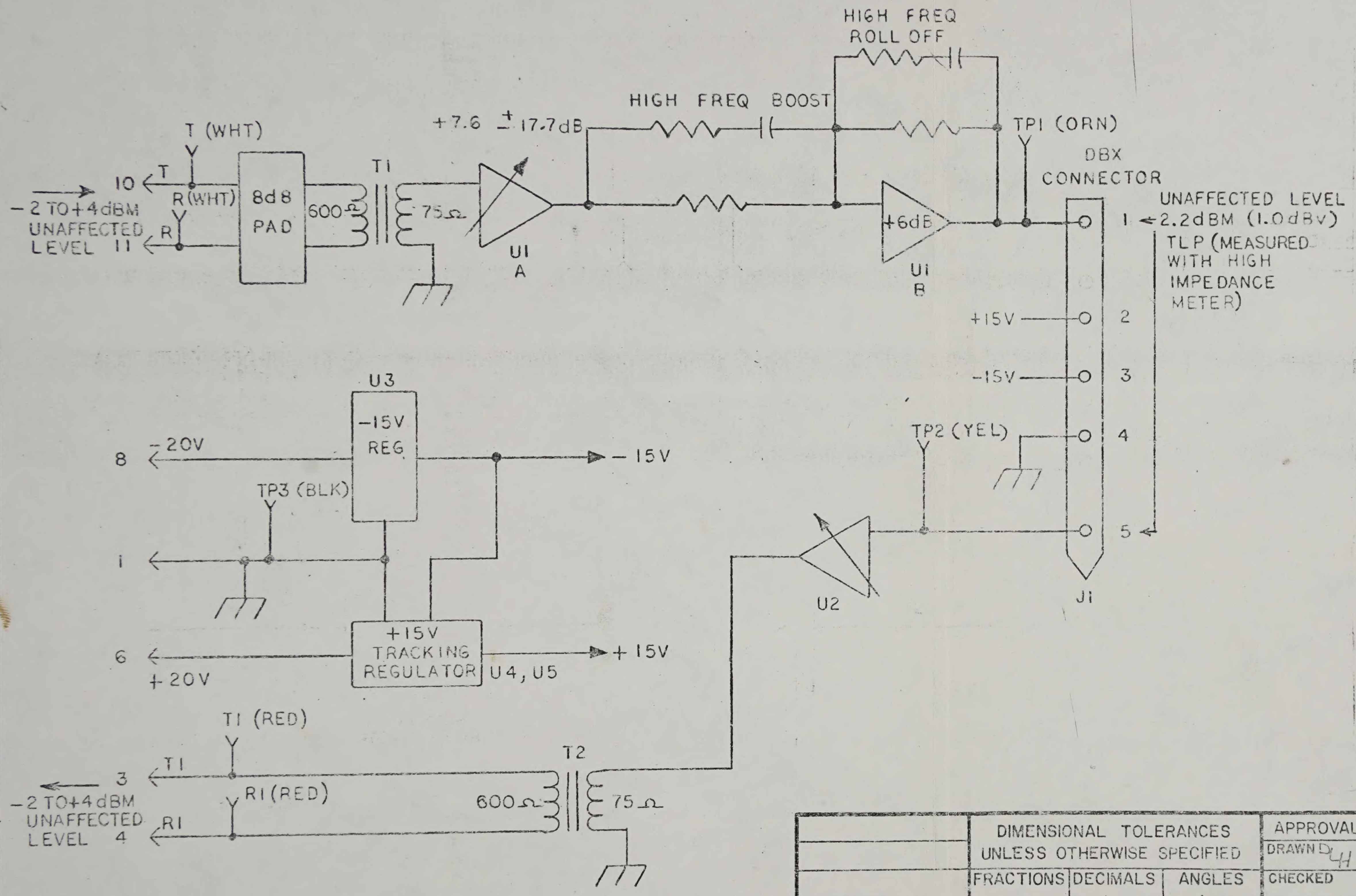
COASTCOM

TITLE:
BLOCK DIAGRAM
PROGRAM AMPLIFIER

SIZE	DOCUMENT NUMBER	REV
B	113204-00	A

BISHOP GRAPHICS/ACCUPRESS
REORDER NO. A-3108

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	RELEASE	3/6/80	TW


HIGH FREQ ROLL OFF
HIGH FREQ BOOST
+7.6 ± 17.7dB
T (WHT)
T
10
R (WHT)
-2 TO +4 dBM UNAFFECTED LEVEL
R
11
8d8 PAD
600
T1
75Ω
U1 A
+6dB
U1 B
TP1 (ORN)
DBX CONNECTOR
1
UNAFFECTED LEVEL 2.2dBM (1.0dBv)
TLP (MEASURED WITH HIGH IMPEDANCE METER)
+15V
2
-15V
3
TP2 (YEL)
4
5
J1
U2
U3
-15V REG
8
-20V
TP3 (BLK)
- 15V
1
6
+15V TRACKING REGULATOR
U4, U5
+ 15V
+20V
T1 (RED)
T1
3
-2 TO +4 dBM UNAFFECTED LEVEL
R1 (RED)
R1
4
T2
600Ω
75Ω

- . Description
- . Alignment
- . Specifications

COASTCOM MODEL 940 Program Amplifier

COASTCOM's Model 940 Program amplifier is a simplex, transformer coupled wide band amplifier with subboard option for Compressor, Expander or Equalizer.

The input circuitry consists of an 8 dB balanced pad to limit peak levels in the transformer, a 600 to 75 ohm transformer (T1), and two amplifiers (U1A und U1B) which provide 6 dB to 12.3 dB of gain in the transmit path. A connector jack (J1) provides input/output and power connections for the optional subboard.

The output amplifier (U2) has a 6 dB gain range and is coupled to the balanced output through a 75 to 600 ohm transformer (T2).

Negative voltage is regulated by an integrated circuit voltage regulator (U3). This device features overcurrent and thermal shutdown to protect other program amplifiers operating from the same supply. Two additional IC's (U4 and U5) are used as a ±15 volt tracking regulator to insure that audio performance is not degraded due to power supply tracking errors. Three test points (TP1, 2,3) are provided for circuit alignment.

CIRCUIT ALIGNMENT (using Compandors). In any compressor/expander application, it is critical that the unaffected level (also called focal point) be the same at the compressor input and the expander input. This will insure proper frequency & level response.

1. Generate a 1 kHz test tone at the desired unaffected level. Apply this tone at origin of the program material (not at the 940 input).
2. Connect a high-impedance level meter (HP400L or equivalent) between TP1 & TP3. Adjust the RX potentiometer (Top) to obtain a 2.2 dBm (1 dBv) meter indication.
3. Connect the meter between TP2 &TP3. Meter should read the same as step 2.
4. Adjust the TX potentiometer for the desired output level.

PERFORMANCE SPECIFICATIONS

Frequency Response		40Hz to 100Hz	+0, -0.5 dB
		100Hz to 15000Hz	+ 0.1 dB
Harmonic Distortion			
		40Hz to 100Hz	≤ 0.5% @ peak pgm level
		100Hz to 15kHz	≤ 0.3% @ peak pgm level
Impedance	Input		600 ohm balanced
	Output		600 ohm balanced
Levels	Input -	Avg Pgm	-2 to +4 (0 dBm0)
		peak pgm	+14 dBm0
	Output -	Avg Pgm	-2 to +4 (0 dBm0)
		peak pgm	+14 dBm0 +18 dBm Absolute Level (normally +20 dBm)

Power ±20Vdc @ 150 mA (including compandor)

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED			APPROVALS	DATE
FRACTIONS	DECIMALS	ANGLES	DRAWN DH	1-7-80
± 1/16	XX ± .015 (.381 mm) XXX ± .010 (.254 mm)	± 1°	CHECKED	
			ENGINEER TW	3/6/80
MATERIAL:				
FINISH:			SCALE NONE	
			SHT 1 OF 1	

113199-00
NEXT ASSEMBLY

COASTCOM

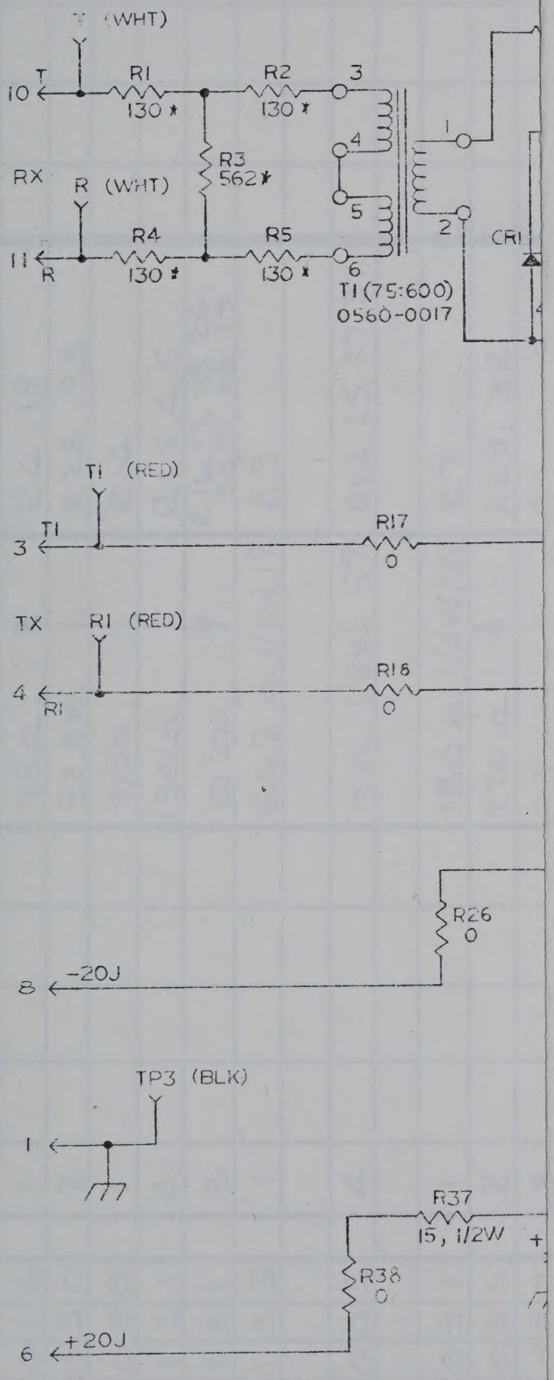
TITLE:
BLOCK DIAGRAM
PROGRAM AMPLIFIER

SIZE	DOCUMENT NUMBER	REV
B	113204-00	A

BISHOP GRAPHICS/ACCUPRESS REORDER NO. A-8108

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	RELEASE	12-26-79	TW

C3 SHORTED AND WAS REPLACED
9/22/80 AC



T (WHT)
T
10
R1
130 *
R2
130 *
3
4
5
1
2
6
R3
562 *
RX
R (WHT)
R4
130 *
R5
130 *
11
R
T1 (75:600)
0560-0017
CR1
T1 (RED)
T1
3
R17
0
TX
R1 (RED)
4
R1
R18
0
R26
0
8
-20J
TP3 (BLK)
1
R37
15, 1/2W
+
R38
0
6
+20J

DIMENSIONAL TOLERANCES
UNLESS OTHERWISE SPECIFIED

FRACTIONS	DECIMALS	ANGLES
± 1/16	XX ± .015 (.381 mm) XXX ± .010 (.254 mm)	± 1°

MATERIAL:

FINISH:

APPROVALS	DATE
DRAWN DCL	12-26-79
CHECKED LWS	1/30/80
ENGINEER TW	3/6/80

SCALE NONE
SHT 1 OF 1

COASTCOM

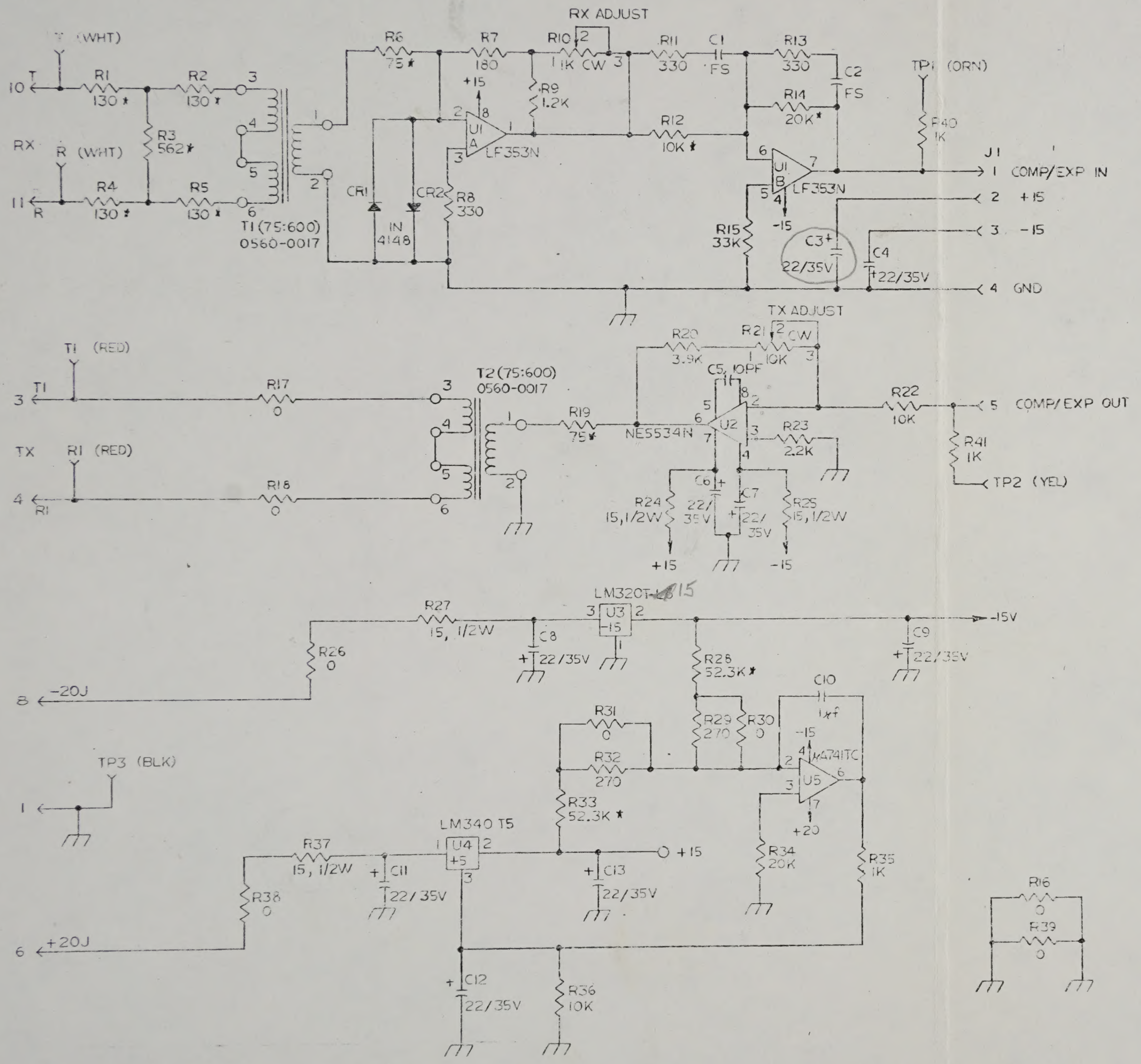
TITLE:
SCHEMATIC
PROGRAM AMPLIFIER

SIZE	DOCUMENT NUMBER	REV
D	113196-00	A

BISHOP GRAPHICS/ACCUPRESS
REORDER NO. A-8110

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	RELEASE	12-26-79	

C3 SHORTED AND WAS REPLACED
9/22/80 AC


RX ADJUST
T (WHT)
R (WHT)
RX
10
11
R1 130
R2 130
R3 562
R4 130
R5 130
T1 (75:600) 0560-0017
CR1
CR2
IN 4148
R6 75
R7 180
R8 330
R9 1.2K
R10 1K CW
R11 330
C1 FS
R12 10K
R13 330
C2 FS
R14 20K
R15 33K
+15
-15
U1 A LF353N
U1 B LF353N
C3 + 22/35V
C4 22/35V
TP1 (ORN)
R40 1K
J1
1 COMP/EXP IN
2 +15
3 -15
4 GND
TX ADJUST
T1 (RED)
R1 (RED)
TX
3
4
R17 0
R18 0
T2 (75:600) 0560-0017
R19 75
R20 3.9K
R21 10K CW
C5 10PF
NE5534N
U2
R22 10K
R23 2.2K
5 COMP/EXP OUT
R41 1K
TP2 (YEL)
R24 15, 1/2W
C6 22/35V
C7 22/35V
R25 15, 1/2W
LM320T-15
U3 -15
R26 0
R27 15, 1/2W
C8 22/35V
C9 22/35V
-15V
8 -20J
R28 52.3K
R29 270
R30 0
R31 0
R32 270
R33 52.3K
C10 1uf
U5 μA741TC
+20
R34 20K
R35 1K
TP3 (BLK)
1
LM340 T5
U4 +5
R37 15, 1/2W
C11 22/35V
C13 22/35V
+15
R38 0
6 +20J
C12 22/35V
R36 10K
R16 0
R39 0

NOTES:
1 RESISTORS WITH ★ DENOTE 1/8W, 1% uF
ALL OTHER RESISTORS ARE 1/4W, 5% uF

REFERENCE DOCUMENTS			
NOMENCLATURE	SIZE	DWG NUMBER	REV
PCB ASSEMBLY	D	113199-00	A1
COMP. LAYOUT	D	113200-00	A1
FAB/ARTWORK	C	113201-00	A
SCHEMATIC			

113223-00
113222-00
NEXT ASSEMBLY

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS	DECIMALS	ANGLES
± 1/16	XX ± .015 (.381mm) XXX ± .010 (.254mm)	±1°

MATERIAL:
FINISH:

APPROVALS	DATE
DRAWN	12-26-79
CHECKED	1/30/80
ENGINEER	3/6/80

SCALE NONE
SHT 1 OF 1

COASTCOM

TITLE: SCHEMATIC PROGRAM AMPLIFIER

SIZE	DOCUMENT NUMBER	REV
D	113196-00	A

B-SHOP GRAPHICS ACCUPRESS REORDER NO. A8150

ITEM #	SIZE	PART NUMBER	REV	VERSION QUANTITY					DESCRIPTION	REFERENCE DESIGNATIONS	SHORT	ISSUE 2	ISSUE 1	TOT REQ'D	UNIT COST	TOT COST	ACCT #
				01													
1									RESISTORS								
2		0470-0003		1					10K, 1/8W, 1%	R12							
3		0470-0016		1					75Ω,	R6, 19							
4		0470-0030		2					52.3K,	R28, 33							
5		0470-0038		1					20K,	R14							
6		0470-0121		4					130Ω,	R1, 2, 4, 5							
7		0470-0131		8					0Ω,	R16, 17, 18, 26, 30, 31, 38, 39							
8		0470-0133		1					562Ω, 1/8W, 1%	R3							
10		0471-0003		4					15Ω 1/2W. 5%	R24, 25, 27, 37							
12		0472-0031		1					180Ω, 1/4W, 5%	R7							
13		0472-0035		2					270Ω	R29, 32							
14		0472-0037		3					330Ω	R8, 11, 13							
15		0472-0049		3					1K	R35, 40, 41							
16		0472-0051		1					1.2K	R9							
17		0472-0057		1					2.2K	R23							
18		0472-0063		1					3.9K	R20							
19		0472-0073		2					10K	R22, 36							
20		0472-0080		1					20K	R34							
21		0472-0085		1					33K, 1/4W, 5%	R15							
									POTENTIOMETERS								
24		0475-0011		1					1K, 15T	R10							
25		0475-0014		1					10K 15T	R21							

B/M	TITLE PROGRAM AMPLIFIER	PAGE 2 OF 4	DRAWN RH 2/12/80	APPROVED BY TW 3/6/80	J.O. №	DATE FILLED / /	UNIT TOTAL QUANTITY · UNIT TOTAL QUANTITY · UNIT TOTAL QUANTITY
SIZE A	ASSEMBLY № 113199-00	REV A	REV DATE / /	CHECKED / /	APPROVED BY / /	UNIT QTY	DATE ISSUED / /

COASTCOM

ISSUE-C 9/73

ITEM #	SIZE	PART NUMBER	REV	VERSION 01	QUANTITY				DESCRIPTION	REFERENCE DESIGNATIONS	SHORT	ISSUE 2	ISSUE 1	TOT REQ'D	UNIT COST	TOT COST	ACCT #
									CAPACITORS								
27		0152-0027		9					22/35V	C3, 4, 6, 7, 8, 9, 11, 12, 13,							
29		0154-0002		1					10 pf	C5							
30		0154-0113		1					1µf MONO	C10							
32		0154-XXXX		2					FACTORY SELECT	C1, 2							
									SEMICONDUCTORS								
35		0313-0006		1					µA741TC	U5							
36		0313-0068		1					LM340T5	U4							
37		0313-0071		1					NE 5534N	U2							
38		0313-0112		1					LM320T-15	U3							
39		0313-0120		1					LF 353N	U1							
									DIODES								
42		0482-0004		2					IN4148	CR1, 2							
									TRANSFORMERS								
45		0560-0017		2					75:600TNI	T1, 2							
47		0210-0395		1					MOLEX WAFERCOM 09-18-5	J1							
49		0280-0076		4					MINI CLIPS								

B/M	TITLE PROGRAM AMPLIFIER	PAGE 3 OF 4	DRAWN DH 2/12/80	APPROVED BY TW 3/6/80	J.O. Nº	DATE FILLED / /	UNIT / TOTAL QUANTITY — UNIT / TOTAL QUANTITY — UNIT / TOTAL QUANTITY
SIZE A	ASSEMBLY Nº 113199-00	REV A	REV DATE / /	CHECKED / /	APPROVED BY / /	UNIT QTY	DATE ISSUED / /

COASTCOM

ISSUE-C 9/73

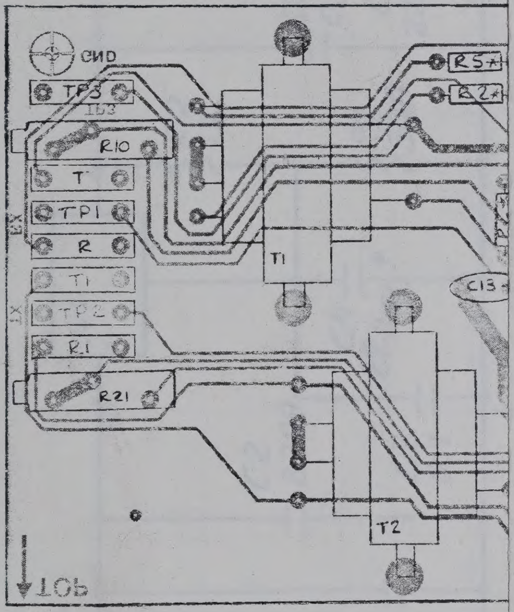
ITEM #	SIZE	PART NUMBER	REV	VERSION	QUANTITY				DESCRIPTION	REFERENCE DESIGNATIONS	SHORT	ISSUE 2	ISSUE 1	TOT REQ'D	UNIT COST	TOT COST	ACCT #
				01													
									TEST POINTS								
52		0210-0313		A2					WHT	T, R							
53		0210-0313		B2					RED	T1, R1							
54		0210-0313		C1					BLK	TP3							
55		0210-0313		F1					ORN	TP1							
56		0210-0313		G1					YEL	TP2							
58		0280-0099		4					#4-#4X9/16 SWAGE STANDOFFS								
60	C	113201-00	A	1					PL BD								
61	D	113198-00	A	REF					SCHEMATIC								
62	D	113199-00	A	REF					ASSY								

B/M	TITLE PROGRAM AMPLIFIER	PAGE 4 OF 4	DRAWN RH 2/12/80	APPROVED BY TW 3/6/80	J.O. Nº	DATE FILLED / /	UNIT TOTAL UNIT TOTAL UNIT TOTAL	
SIZE A	ASSEMBLY Nº 113199-00	REV A	REV DATE / /	CHECKED / /	APPROVED BY / /	UNIT QTY	DATE ISSUED / /	QUANTITY QUANTITY QUANTITY

COASTCOM

ISSUE-C 9/73

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	RELEASE	3/6/80	Jw
	A1	ECO# ROTATE CONNECTOR (J1)	3-11-80	


GND
TP3
R10
T
TP1
R
T1
TP2
R1
R21
EX
IX
T1
T2
R5*
R2*
C13
TOP

70 μf
570 cf

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED			APPROVALS	DATE
FRACTIONS	DECIMALS	ANGLES	DRAWN	2/
± 1/16	XX ±.015 (.381 mm) XXX ±.010 (.254 mm)	±1°	CHECKED	
			ENGINEER	3/6/80
MATERIAL:				
FINISH:			SCALE 2X1	
			SHT 1 OF 1	

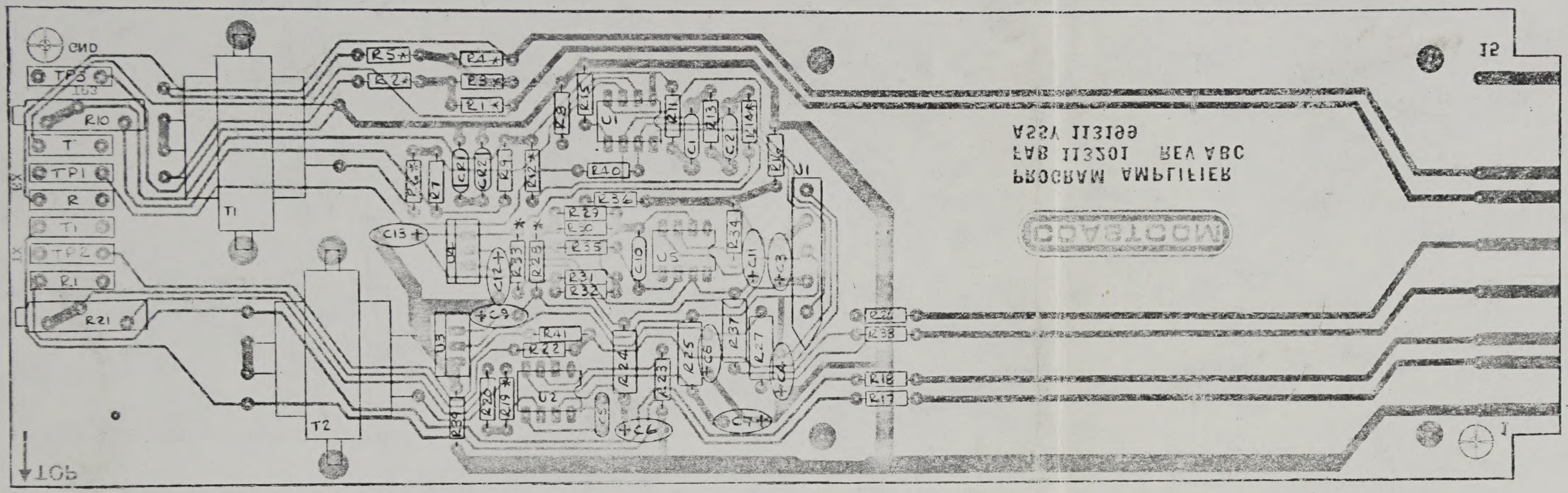
COASTCOM

TITLE:
C/L
PROGRAM AMPLIFIER

SIZE	DOCUMENT NUMBER	REV
D	113200-00	A1

BISHOP GRAPHICS/ACCUPRESS REORDER NO. A-8110

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	RELEASE	3/6/80	GW
	A1	ECO* ROTATE CONNECTOR (J1)	3-11-80	


GND
TP3
R10
T
TP1
R
T1
TP2
R1
R21
T1
T2
TOP
R5*
R2*
R4*
R3*
R1*
R15
C1
R11
R13
R14*
C2
R12
U1
R10
R32
R7
CR1
CR2
C13
U4
R29
R30
R35
R33
R28
R31
R32
C12
C10
U5
R34
C11
C3
C9
R41
R22
U3
R24
R23
R25
C8
R37
R27
C4
R38
R18
R17
R19
U2
C6
C7
J2
J1
ASSY 113199
FAB 113201 REV ABC
PROGRAM AMPLIFIER
COASTCOM

NOTES:
1. RESISTORS WITH * DENOTES 1/8W, 1% MF
ALL OTHER RESISTORS ARE 1/4W, 5% CF

REFERENCE DOCUMENTS			
NOMENCLATURE	SIZE	DWG NUMBER	REV
PCB ASSEMBLY	D	113199-00	A1
COMP LAYOUT			
FAB/ARTWORK	C	113201-00	A
SCHEMATIC	D	113198-00	A

113223-00
113222-00
NEXT ASSEMBLY

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS	DECIMALS	ANGLES
± 1/16	XX ± .015 (.381mm) XXX ± .010 (.254mm)	±1°

MATERIAL:

FINISH:

APPROVALS	DATE
DRAWN	3/6/80
CHECKED	
ENGINEER	3/6/80

SCALE 2X1
SHT 1 OF 1

COASTCOM

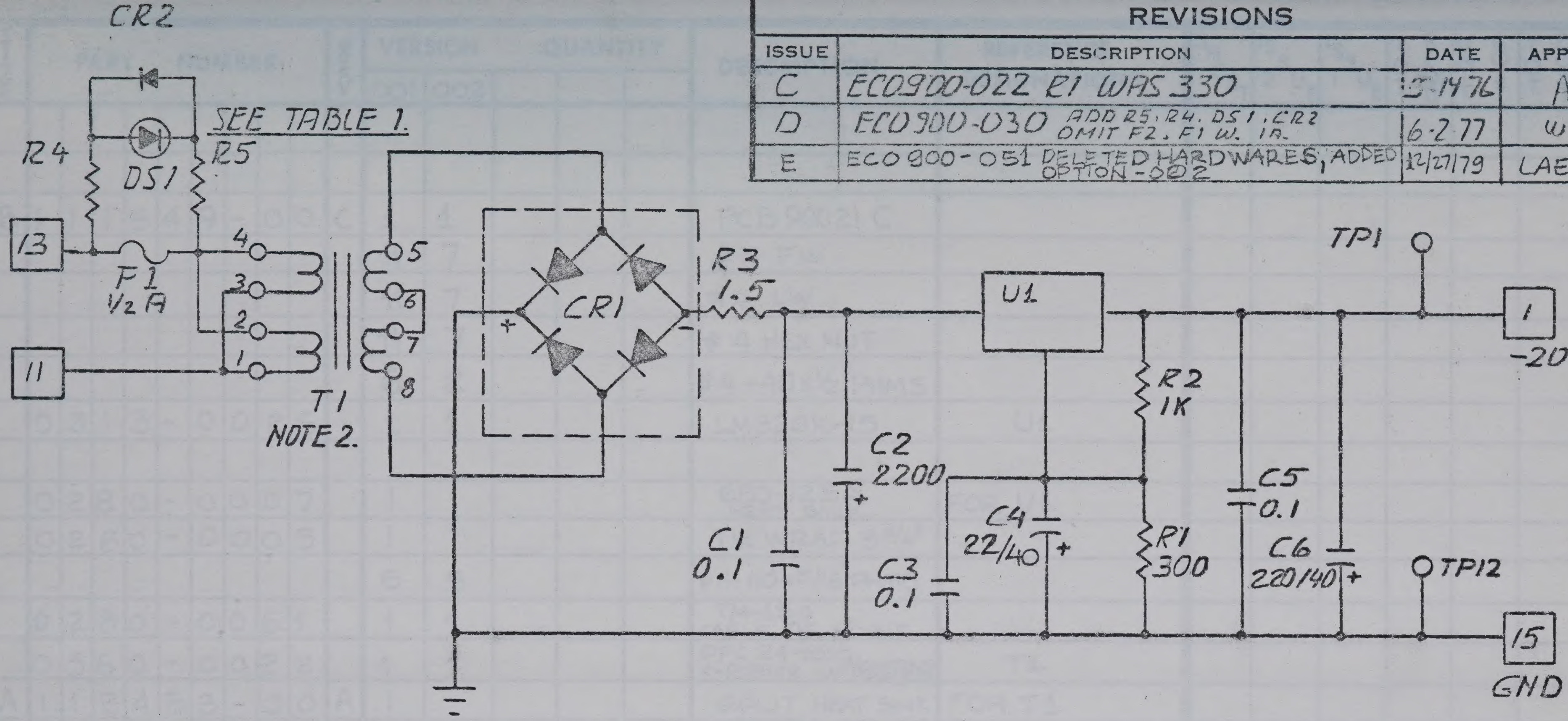
TITLE: C/L PROGRAM AMPLIFIER

SIZE	DOCUMENT NUMBER	REV
D	113200-00	A1

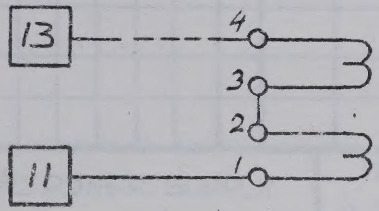
BISHOP GRAPHICS/ACCUPRESS REORDER NO. A-9110

REVISIONS

ISSUE	DESCRIPTION	DATE	APPROVED
C	ECO900-022 R1 WAS 330	5-14-76	AF
D	ECO900-030 ADD R5, R4, DS1, CR2 OMIT F2. F1 W. 1A.	6-2-77	wL
E	ECO 900-051 DELETED HARDWARES, ADDED OPTION -002	12/27/79	LAE


CR2
SEE TABLE 1.
R4
DS1
R5
13
11
F1
½ A
4
3
2
1
5
6
7
8
T1
NOTE 2.
CR1
+
-
R3
1.5
C1
0.1
C2
2200
+
C3
0.1
C4
22/40
+
U1
R2
1K
R1
300
C5
0.1
C6
220/40
+
TP1
TP12
1
-20V
15
GND

NOTES:
1. UNLESS OTHERWISE SPECIFIED:
RESISTANCES ARE IN OHMS.
CAPACITANCES ARE IN MICROFARADS.
2. 115VAC STRAP 1-3, 4-2 AS SHOWN ABOVE
230VAC STRAP 2-3 AS SHOWN BELOW



REF. DWGS: FAB B111549-00C
ASSY B111659-00E
C/L B111660-00E

TABLE 1.

INPUT VOLT.	R4, R5
115VAC	120K
230VAC	220K

TITLE
POWER SUPPLY

ASSEMBLY 90021-001/-002
DRAWN CW DATE 10-8-75
CHECKED DATE
APPROVED AF DATE 10-22-75

COASTCOM
2346 STANWELL DRIVE
CONCORD, CALIF. 94520
TEL. 415-825-7500

SIZE	DRAWING NUMBER	ISSUE
A	111592-00	E

ITEM #	SIZE	PART NUMBER	REV	VERSION QUANTITY 001	002				DESCRIPTION	REFERENCE DESIGNATIONS	SHORT	ISSUE 2	ISSUE 1	TOT REQ'D	UNIT COST	TOT COST	ACCT #
1																	
2																	
3	B	111549-00	C	1	1				PCB 90021 C								
4				11	7				#4 FW								
5				11	7				#4 LW								
6				11	7				# 4 HEX NUT								
7				6	2				#4-40x½" PHMS								
8		0313-0026		1	1				LM320K-15	U1							
9																	
10		0280-0057		1	1				680-125A HEAT SINK	FOR U1							
11		0280-0003		1	1				TIE WRAP 3¾"								
12				5	5				#4-40x5/16" PHMS								
13		0280-0061		1	1				TM-1S4 CABLE TIE MOUNT								
14		0560-0022		1	1				DPC 24-1000 X-FORMER W/ MOUNTING BRACKET	T1							
15	A	112483-00	A	1					SPLIT HEAT SINK	FOR T1							
16	A	111656-00	A	1					HEAT SINK MOUNTING PLATE	FOR T1							
17									BRACKET								
18				3	3				22AWG BUSS WIRE x½"	J							
19																	
20																	
21																	
22																	
23																	
24																	
25																	

B/M	TITLE 20Vdc POWER SUPPLY		PAGE 2 OF 4	DRAWN DPH 2/4/80	APPROVED BY / /	J.O. №	DATE FILLED / /	UNIT TOTAL QUANTITY	UNIT TOTAL QUANTITY	UNIT TOTAL QUANTITY
SIZE A	ASSEMBLY № B111659-00	REV E	REV DATE / /	CHECKED / /	APPROVED BY / /	UNIT QTY	DATE ISSUED / /			

COASTCOM

ISSUE-C 9/73

ITEM #	SIZE	PART NUMBER	REV	VERSION QUANTITY 001	002			DESCRIPTION	REFERENCE DESIGNATIONS	SHORT	ISSUE 2	ISSUE 1	TOT REQ'D	UNIT COST	TOT COST	ACCT #
26								RESISTORS 1/2W, 5%								
27		0471-0021		1	1			300	R1							
28																
29								1/4W, 5%								
30		0472-0049		1	1			1000	R2							
31		0470-0213		1	1			1.5, 3 1/4W	R3							
32		0472-XXXX		2	2			FS	R4, 5							
33																
34								CAPACITORS								
35		0152-0010		1	1			22uF/40V ELECTROLITIC	C4							
36		0152-0016		1	1			220uF/40V ELECTROLYTIC	C6							
37		0152-0019		1	1			2200uF/40V ELECTROLYTIC	C2							
38		0153-0031						.1uF								
39																
40		0482-0002		1	1			2FB50 DIODE, BRIDGE	CR1							
41		0482-0004		1	1			IN4148	CR2							
42		0482-0101		1	1			555-2003 LED	DS1							
43		0510-0111		1	1			FUSE 1/2A	F1							
44		0510-0112		1	1			FUSE HOLDER	FOR F1							
45																
46		0210-0301		1	1			TEST POINT HANDLE, RED								
47				1	1			INDENTIFICATION LABEL								
48																
49																
50																

B/M	TITLE 20VdC POWER SUPPLY	PAGE 3 OF 4	DRAWN DPH 2/4/80	APPROVED BY / /	J.O. №	DATE FILLED / /
SIZE A	ASSEMBLY № B111659-00	REV E	REV DATE / /	CHECKED / /	APPROVED BY / /	UNIT QTY
						DATE ISSUED / /

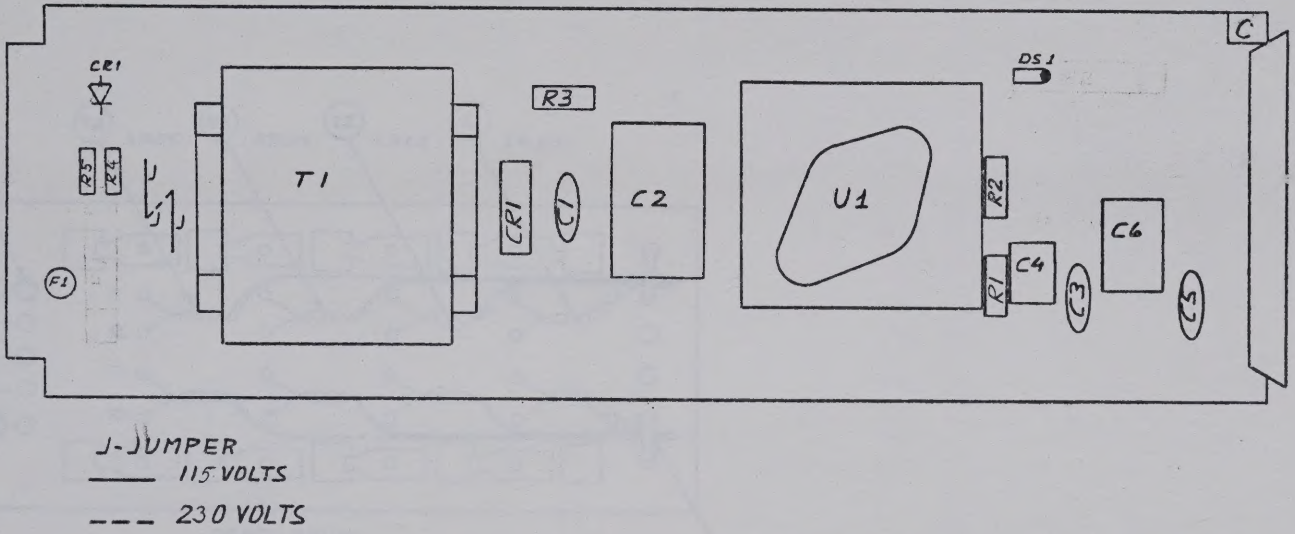
UNIT	TOTAL	UNIT	TOTAL	UNIT	TOTAL
QUANTITY		QUANTITY		QUANTITY	

COASTCOM

ISSUE-C 9/73

REVISIONS

ISSUE	DESCRIPTION	DATE	APPROVED
C	ECO900-022	5-14-76	AF
D	ECO900-030 ADD R5,R4,CR2,DS1,CH. F1. OMIT F2	6-2-77	WL
E	ECO 900-051 DOCUMENT TRACKING	12/27/79	LAE


C
DS 1
CR1
R3
T1
R5
R4
J
J
J
F1
CR1
C1
C2
U1
R2
R1
C4
C3
C6
C5
J-JUMPER
115 VOLTS
230 VOLTS

REFERENCE DOCUMENTS

NOMENCLATURE	SIZE	DWG NUMBER	REV
PCB ASSEMBLY	B	111659-00	E
COMP LAYOUT			
FAB/ARTWORK	B	111549-00	C
SCHEMATIC	A	111592-00	E

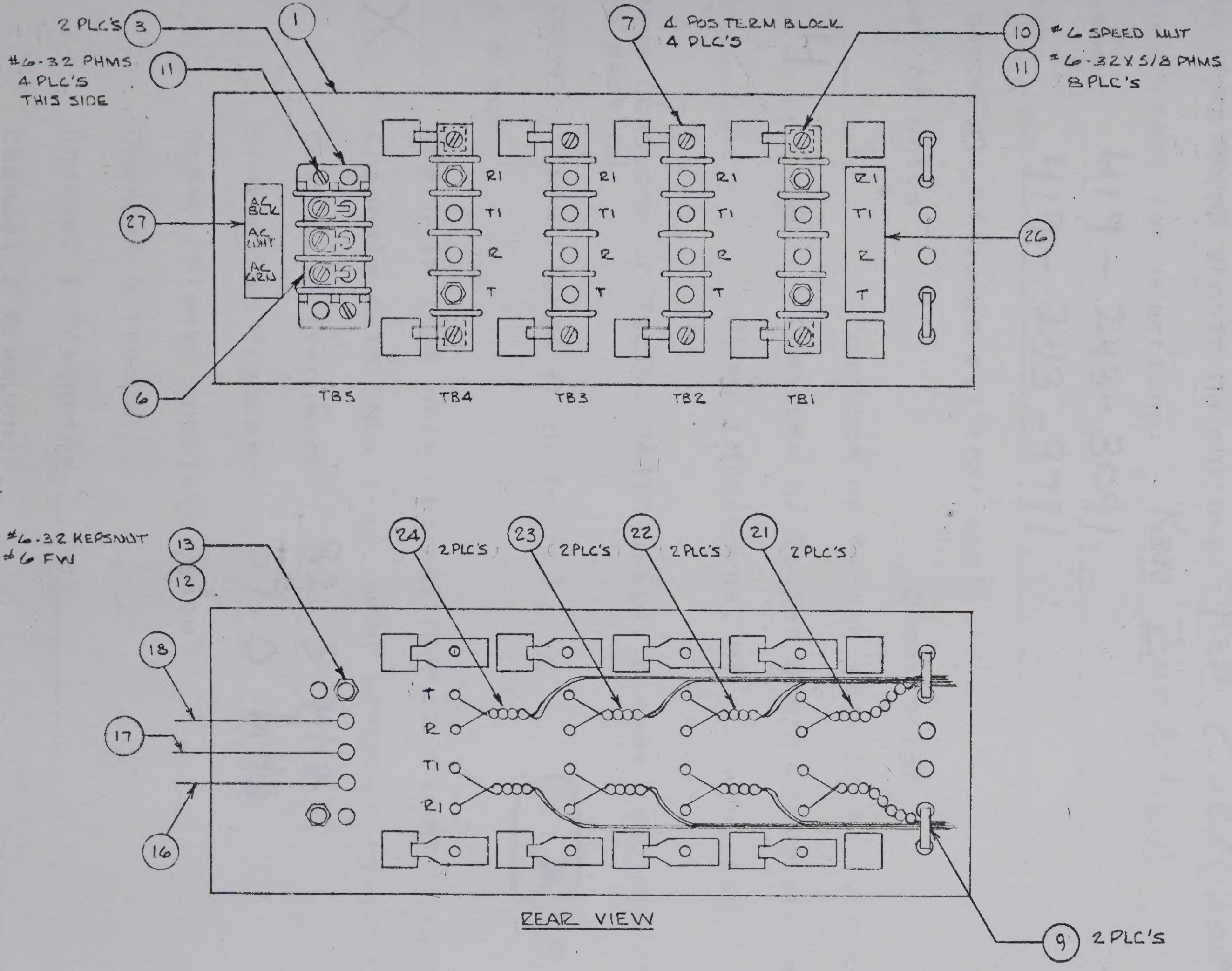
TITLE
POWER SUPPLY
90021C
ASSEMBLY 90021-001/-002
DRAWN AJ DATE 10-8-75
CHECKED DATE
APPROVED WL DATE 5-20-76

COASTCOM
2346 STANWELL DRIVE
CONCORD, CALIF. 94520
TEL. 415 - 825-7500

SIZE	DRAWING NUMBER	ISSUE
B	111660-00	E

REVISIONS

ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	RELEASE	3/13/80	GTW


2 PLC'S 3
#6-32 PHMS
4 PLC'S
THIS SIDE
11
1
7 4 POS TERM BLOCK
4 PLC'S
10 #6 SPEED NUT
11 #6-32 X 5/8 PHMS
8 PLC'S
27
AC BLK
AC WHT
AC GRN
R1
T1
R
T
26
6
TB5
TB4
TB3
TB2
TB1
#6-32 KEPSNUT
#6 FW
13
12
24 2 PLC'S
23 2 PLC'S
22 2 PLC'S
21 2 PLC'S
18
17
16
T
R
T1
R1
9 2 PLC'S
REAR VIEW

REFERENCE DOCUMENTS			
NOMENCLATURE	SIZE	DWG NUMBER	REV
PCB ASSEMBLY			
COMP LAYOUT			
FAB/ARTWORK	B	113202-00	A
SCHEMATIC			

90900-03
SHELF ASSY
NEXT ASSEMBLY

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED		
FRACTIONS	DECIMALS	ANGLES
± 1/16	XX ±.015 (.381mm) XXX ±.010 (.254mm)	±1°

MATERIAL:

FINISH:

APPROVALS	DATE
DRAWN CLH	1/15/80
CHECKED	
ENGINEER GTW	3/13/80

SCALE 1X1
SHT 1 OF 1

COASTCOM

TITLE: ASSY
LINE TERM CARD

SIZE	DOCUMENT NUMBER	REV
C	113203-00	A

BISHOP GRAPHICS/ACCUPRESS® REORDER NO. A-8109

If you are using channels 13 and 14, please fill out and return this form by mail or fax by April 15.

Mail to:
WFMT
303 East Wacker Drive, Suite 800
Chicago, IL 60601
Attn.: Gordon Carter

Fax to:
WFMT
Attn. Gordon Carter
(312) 565-5169

Station call letters: WGTE-FM ; WGLE

Mailing address: P.O. BOX 30
TOLEDO, OH 43697

Person to whom PROMS should be shipped: Ken Zuercher

Person to contact for questions: Ken Zuercher

Phone number: 419-243-3091

Fax number: 419-243-9711

Type of demod(s): (fill in all that apply)

Number of units	Description
	Coastcom or TecTan 412-360 fully agile
4	Coastcom or TecTan BASIC (complete below)
	Other (Microdyne, MicroPhase, etc.)

If you have Coastcom or TecTan BASIC units, please complete the following section.

Type of PROM? New (large IC on board)______ [✓ Old X] DM74S387N

Frequency plan?

	Channels 1-14 only (normal NPR 12 + WFMT NETWORKS)
X	Channels 0-15 (NPR 1-12, WFMT NETWORKS 13+14)
	Channel 0 frequency 82.3 MHz
	Channel 15 frequency 57.0 mHz
	Other (please complete below)
	Channel 0 frequency ______
	Channel 1 frequency ______
	Channel 2 frequency ______
	Channel 3 frequency

Channel 4 frequency ______________

Channel 5 frequency ______________

Channel 6 frequency ______________

Channel 7 frequency ______________

Channel 8 frequency ______________

Channel 9 frequency ______________

Channel 10 frequency ______________

Channel 11 frequency ______________

Channel 12 frequency ______________

Channel 13 frequency ______________

Channel 14 frequency ______________

Channel 15 frequency ______________

If you have any questions about this form, please call Gordon Carter at (312) 565-5032 before 2:00 PM Central Time weekdays.

WCLV/SEAWAY PRODUCTIONS
26501 Emery Industrial Parkway
Cleveland, Ohio 44128
(216) 464-0900

THE ENCLOSED PROMS ARE THE UNITS ORDERED BY YOUR STATION TO REPLACE THE PROMS WHICH WERE PROVIDED TO YOU BY THE CONCERT MUSIC SATELLITE SYSTEM.

THE ENCLOSED PROMS HAVE BEEN GIVEN TO YOU BY THE CONCERT MUSIC CONSORTIUM AND BECOME THE PROPERTY OF YOUR STATION.

IF YOU HAVE ANY QUESTIONS ABOUT THE INSTALLATION PROCESS, PLEASE CALL GORDON CARTER AT WFMT IN CHICAGO (312) 565-5000.

THANK YOU.

DENNIS L. MILLER

FOR:

THE CONCERT MUSIC CONSORTIUM, INC.

IMPORTANT !!

IT IS IMPERATIVE NOT TO DISCHARGE ANY STATIC BUILDUP WHILE CARRYING OR MOVING THE DEMOD THROUGH THE DEMOD!!

GROUND AND DISCHARGE YOURSELF AND THE DEMOD AFTER WALKING ACROSS A CARPET BY TOUCHING THE RACK WITH YOUR HAND FIRST, BEFORE ALLOWING THE DEMOD TO COME IN CONTACT!!

FAILURE TO DO SO WILL RESULT IN SEVERE DAMAGE TO THE RECEIVER!!

THIS INCLUDES DISCHARGING YOURSELF BEFORE TOUCHING THE DEMOD WHEN PERFORMING THIS MODIFICATION!!

A SPECIAL HOTLINE HAS BEEN ARRANGED FOR YOUR CONVENIENCE.

ANY QUESTIONS SHOULD BE DIRECTED TO (216) 338-4494 FROM 9 A.M. TO 5 P.M. E.T.

DURING THE MONTH OF DECEMBER AND THE FIRST WEEK OF JANUARY, THE NUMBER WILL BE FORWARDED AND ANSWERED AFTER HOURS BY AN ON-CALL ENGINEER AT HOME.

WE ARE AWARE THAT MANY OF YOU PERFORM ROUTINE MAINTENANCE ON SUNDAY NIGHT THROUGH MONDAY MORNING. CALLS WILL BE WELCOME AT THIS TIME.

THE HOTLINE WILL BE ANSWERED BY A MESSAGE CENTER FROM 6 P.M. DECEMBER 24 THROUGH 6 A.M. DECEMBER 26, AND FROM 6 P.M. DECEMBER 31 THROUGH 6 A.M. JANUARY 2, 1985.

MODIFICATION PROCEDURE

FOR

COASTCOM MODEL 412 DEMODULATOR

1) Remove power from demodulator shelf.

2) Remove demodulator from shelf and place it on bench with printed circuit side up. At this time, look at the four (4) rear screws. Note that the washers under the screws do not touch any printed circuit runs. This is important when re-assembling the demodulator. Remove the four rear screws holding the printed circuit board, leave front two screws intact. (See figure No. 1)

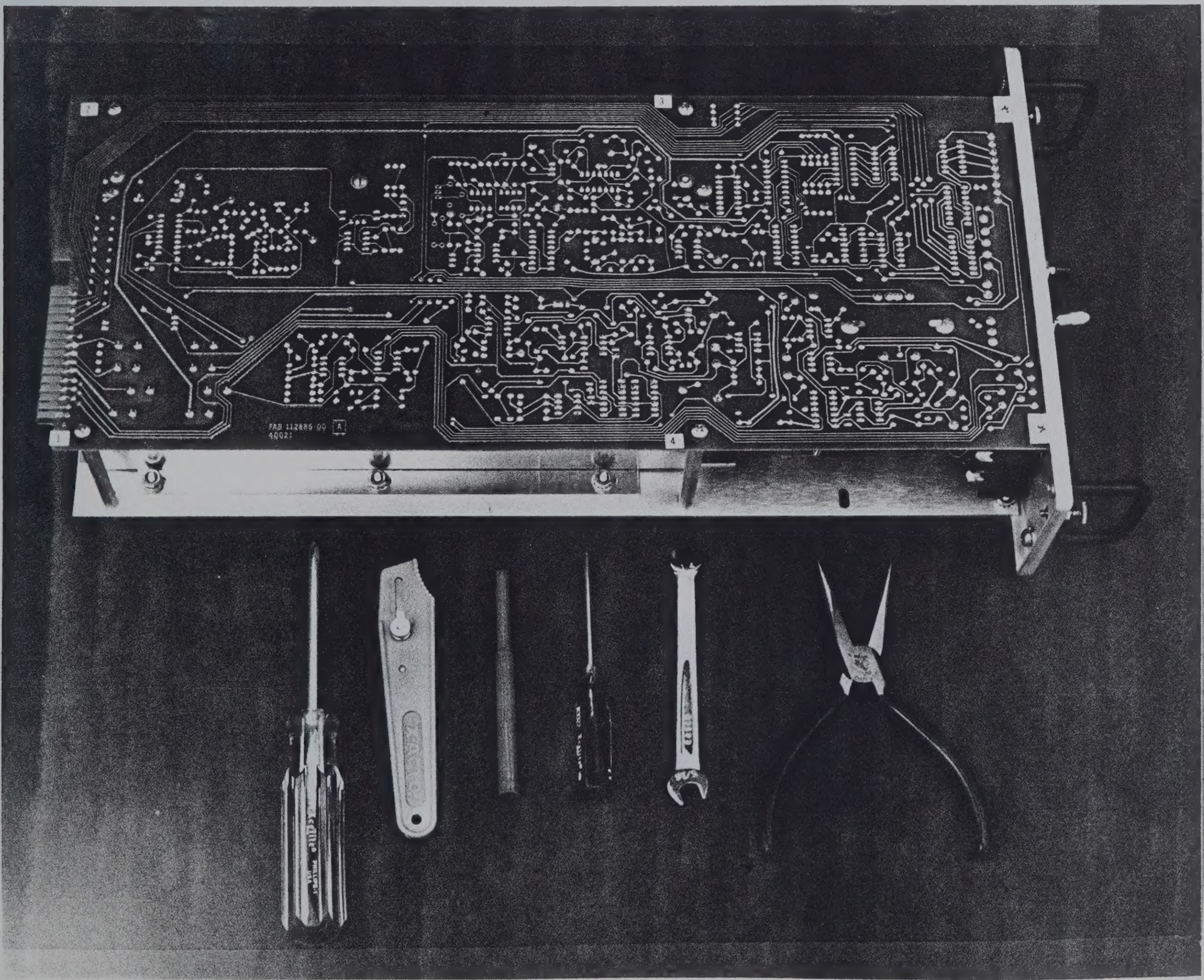


FIGURE NO. 1

3) Holding the two sides of the demodulator together, turn the demodulator over and remove the two screws holding the metal plate to the front panel. (See figure No. 2)
Note: Screws have nut and flat washer.

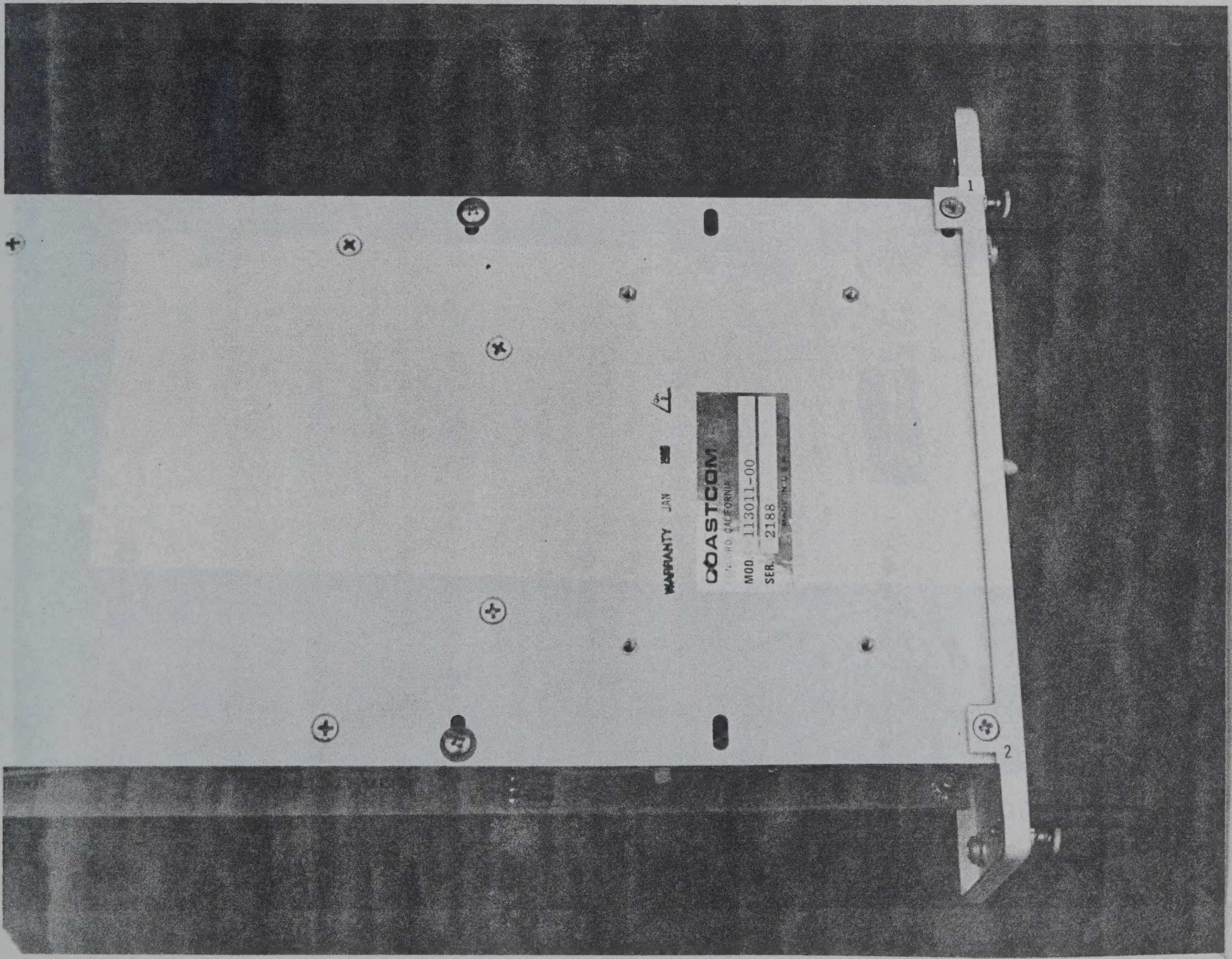

1
2
WARRANTY JAN
COASTCOM
MOD 113011-00
SER. 2188

FIGURE NO. 2

4) With front panel facing to the right, and printed circuit side of the demodulator down against the bench, slide the metal plate back slightly and fold it over. (See figure No. 3)

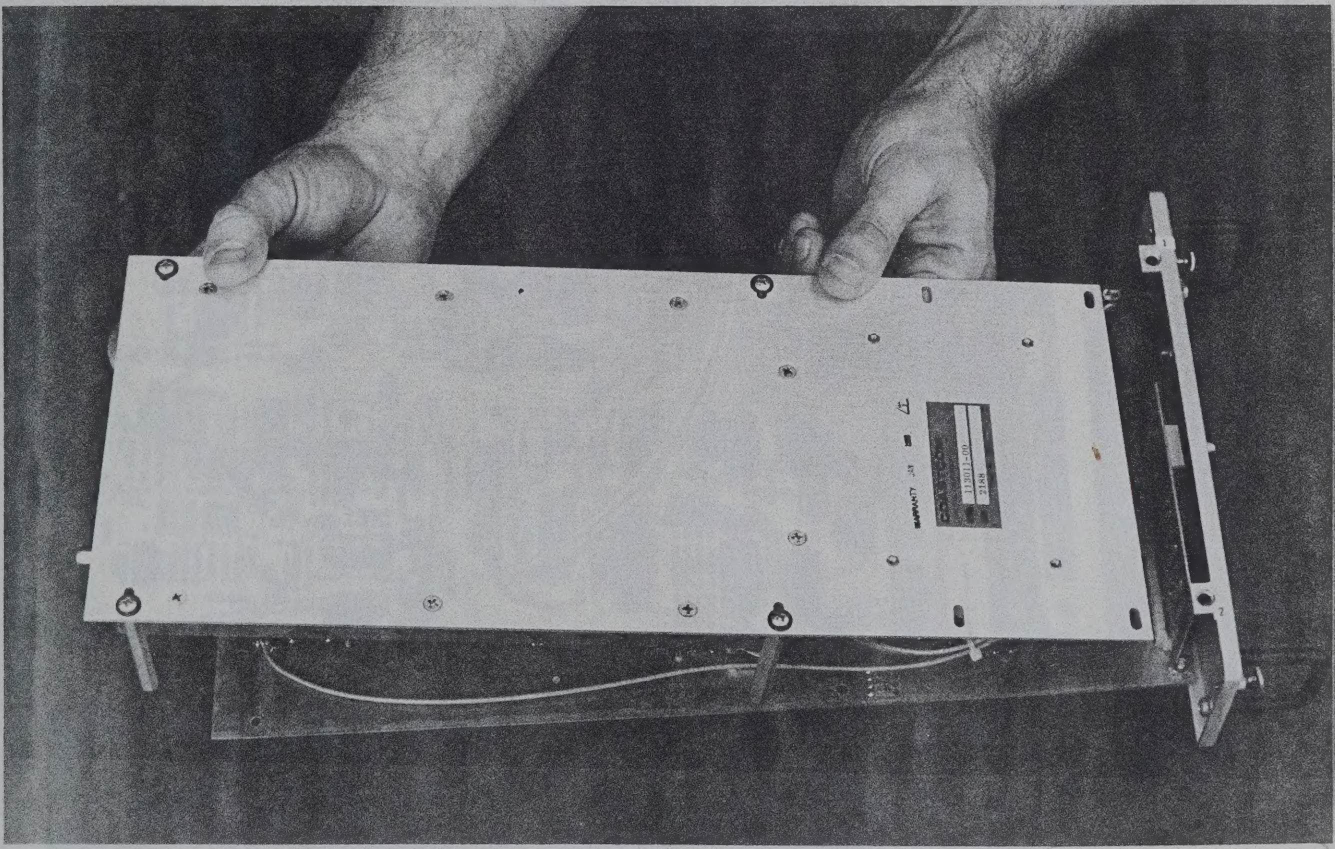


FIGURE NO. 3

5) Refer to figure No. 4 - Locate integrated circuit U5. With a thin bladed screwdriver or similar tool, gently pry U5 from its socket. Note the location of Pin "1" of integrated circuit U5.

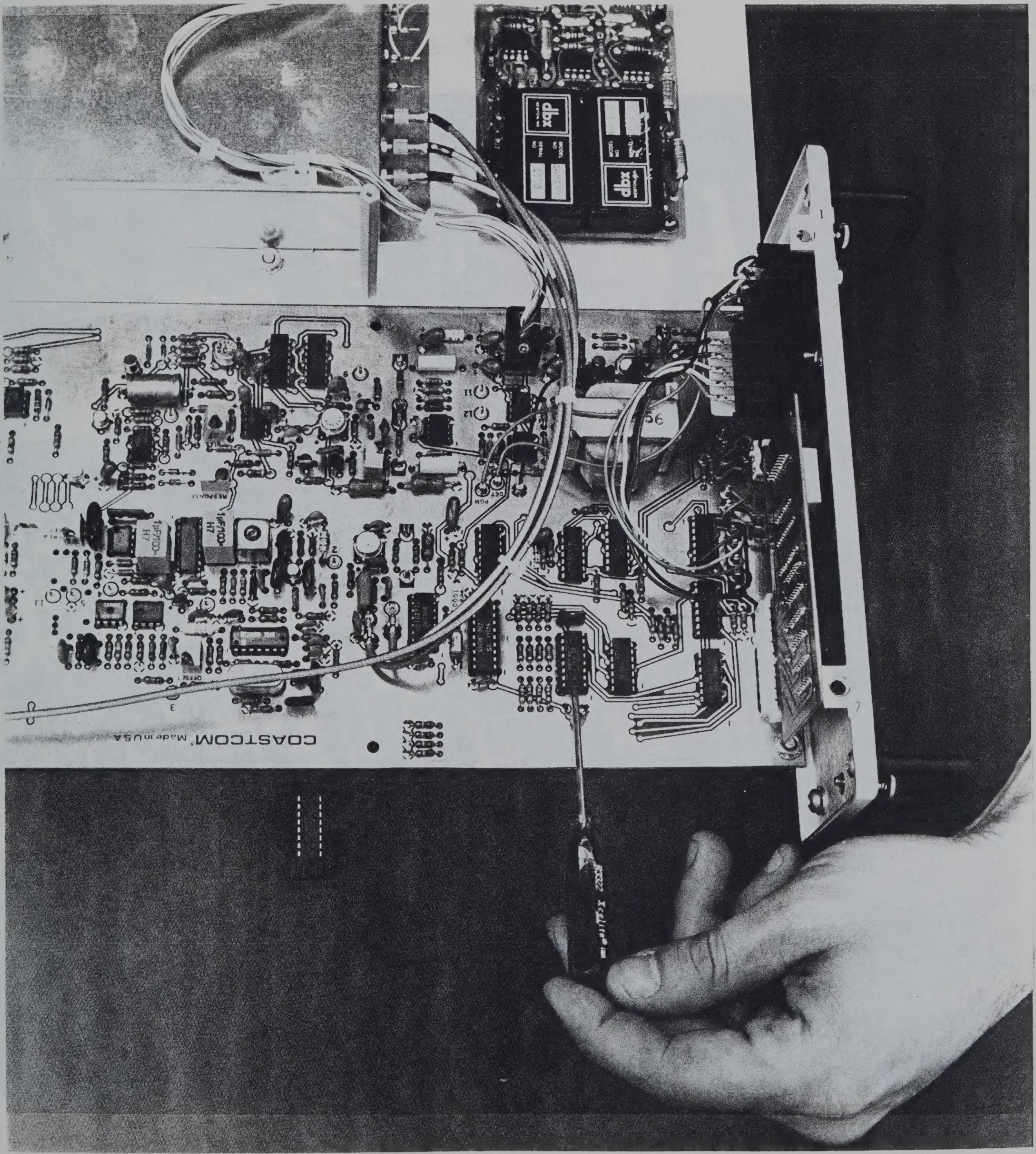

COASTCOM Made in USA
dbx

FIGURE NO. 4

5a) Remove the new integrated circuit U5 from its anti-static protection and insert it into the empty socket. Make sure that the new integrated circuit is oriented the same way as the integrated circuit that was removed. Refer to figure No. 5.

5b) Place the integrated circuit that was removed into the anti-static protection pad for storage.

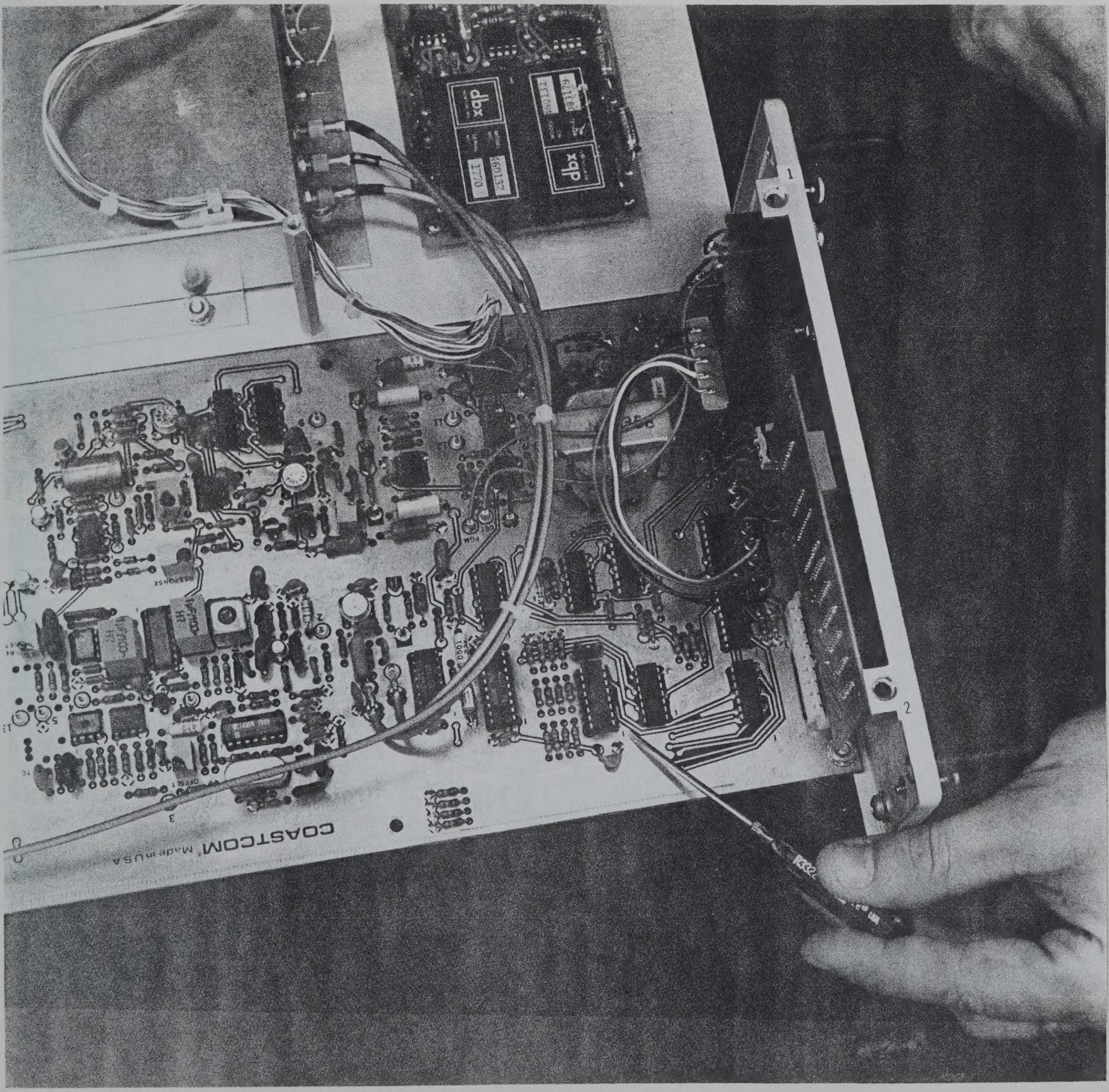


FIGURE NO. 5

6) Remove the thumbwheel switch from the front panel. It may be necessary to remove the two headset jacks before the switch can be removed. (See figure No. 6)

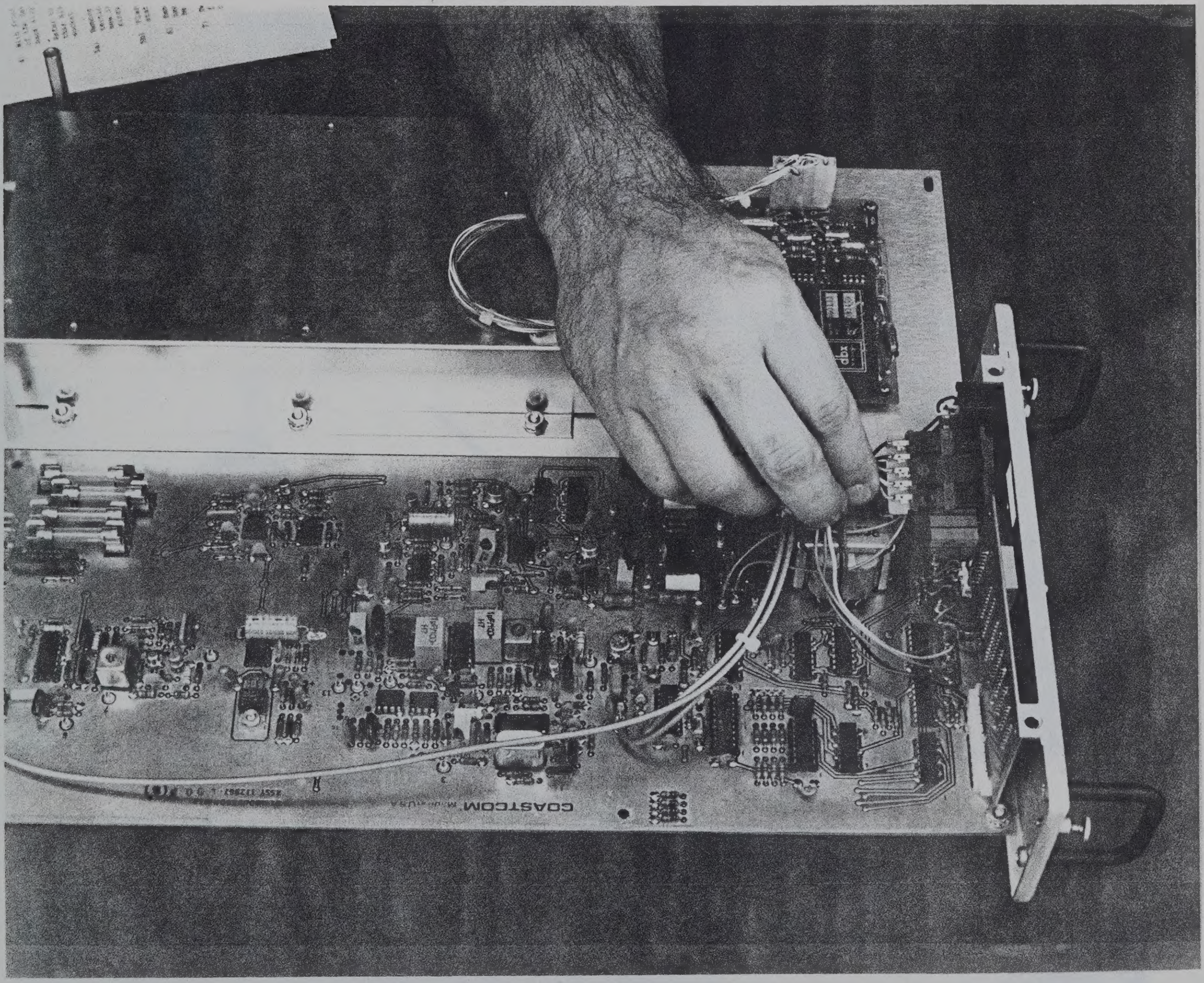


FIGURE NO. 6

7) Two (2) U-Shaped clips hold the switch together. Refer to figure No. 7 - Gently pry these clips off. The switch will come apart into three (3) pieces.

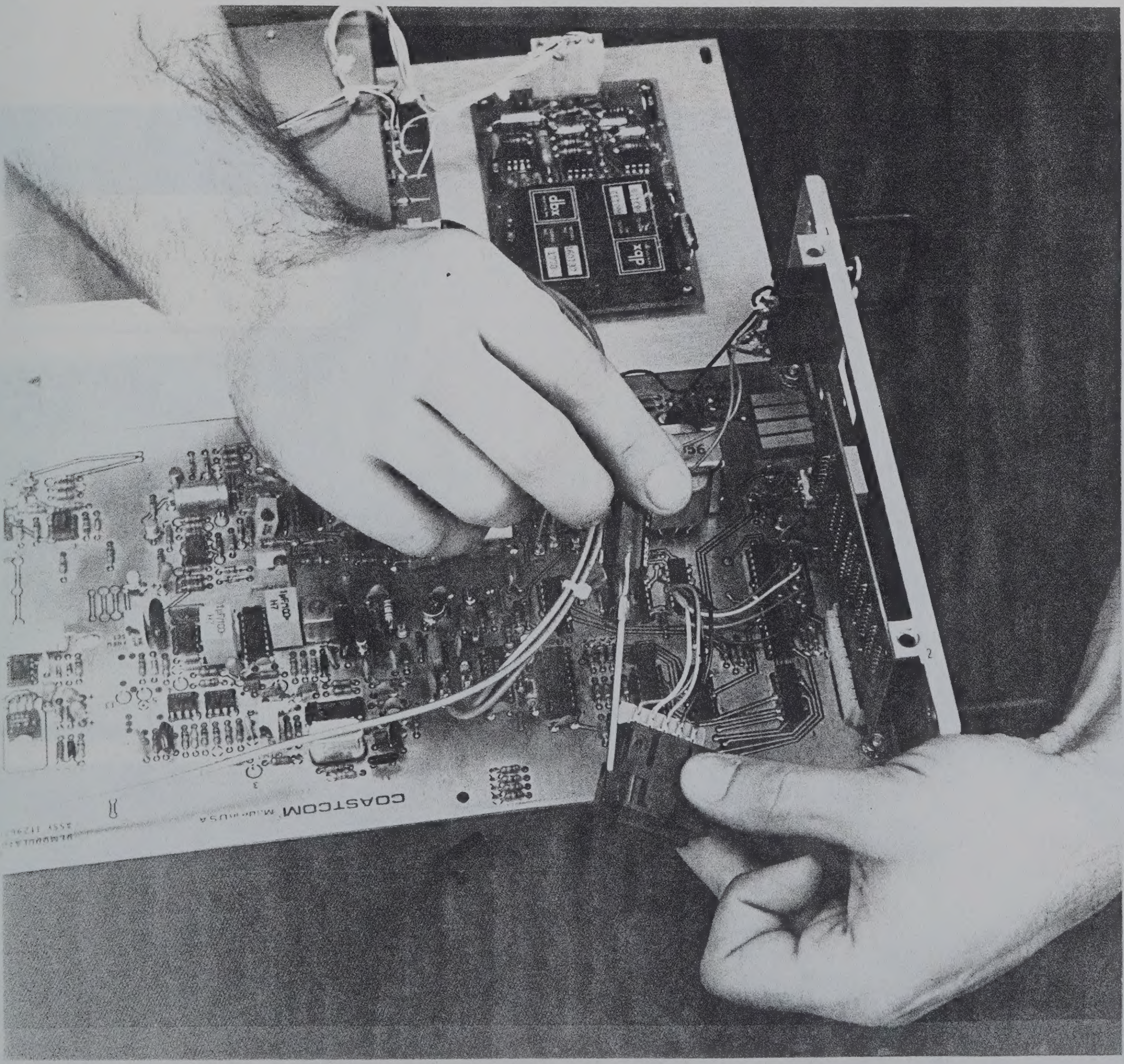


FIGURE NO. 7

8) Remove the two (2) side pieces of the switch. Holding the switch center section with the printed circuit side away and down from you, you will see two small silver colored pin heads. Using a razor blade, or thin knife blade, pry under the head of the pin and remove them. The thumbwheel should now rotate completely around showing all the numbers from zero through fifteen. Refer to figure No. 8.

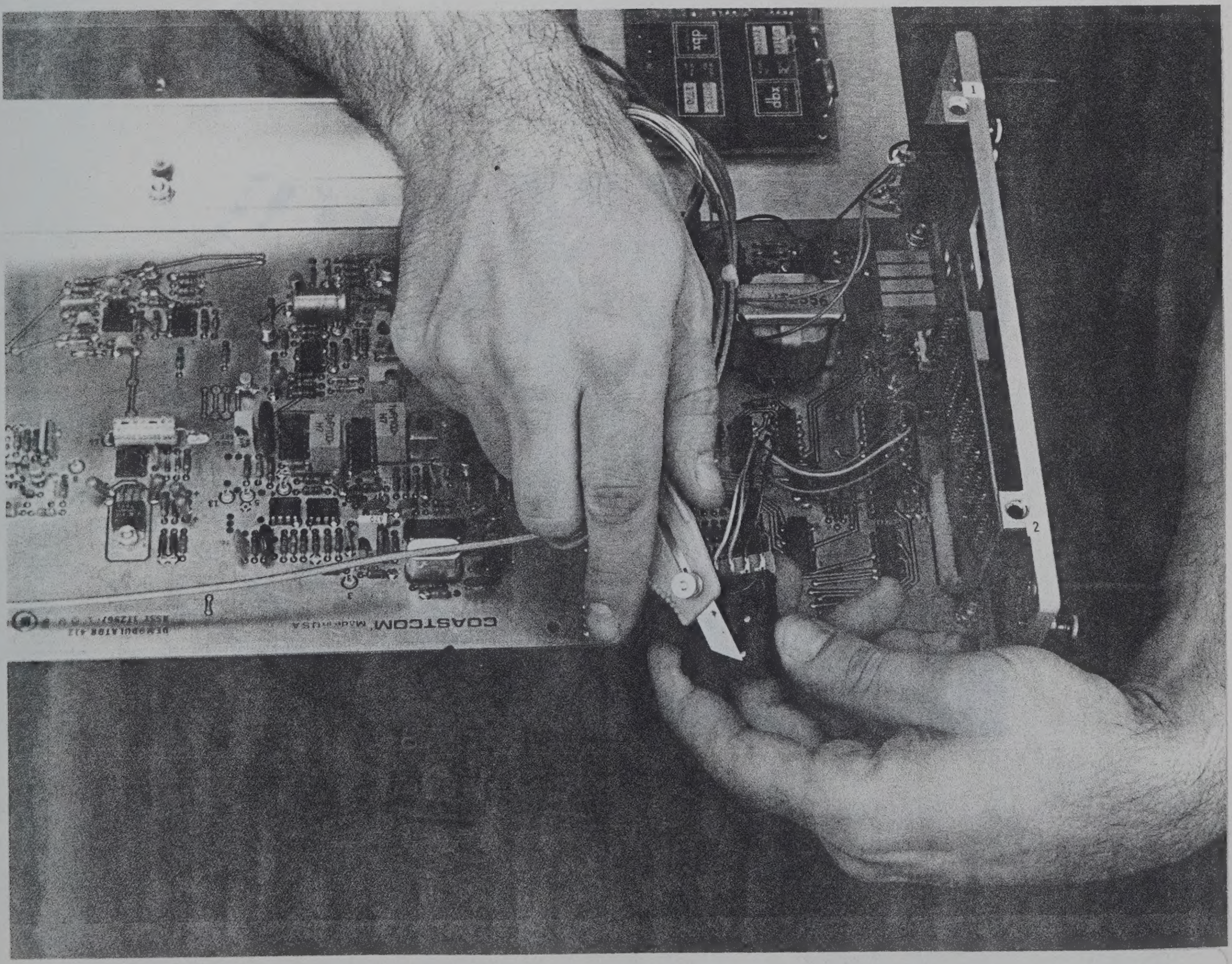


FIGURE NO. 8

9) Re-Assemble the thumbwheel switch.

9a) When remounting thumbwheel to front panel, you can use the red nut-starter tool to start bottom nut.

9b) When re-assembling demodulator, care should be taken to avoid pinching any wires. Note that one of the screws has a cut washer such that it will not touch an adjacent printed circuit run. (Refer to Figure No. 9)

In no case should a washer touch any printed circuit runs.

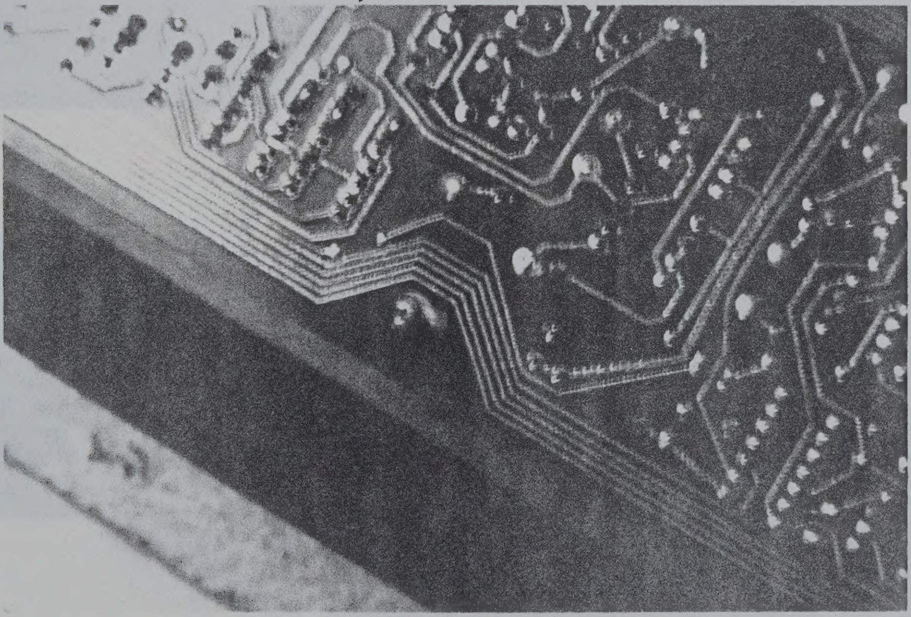


FIGURE NO. 9

9c) After demodulator is completely re-assembled, check that the connectors are seated in their sockets. (Refer to Figures 10 and 11)

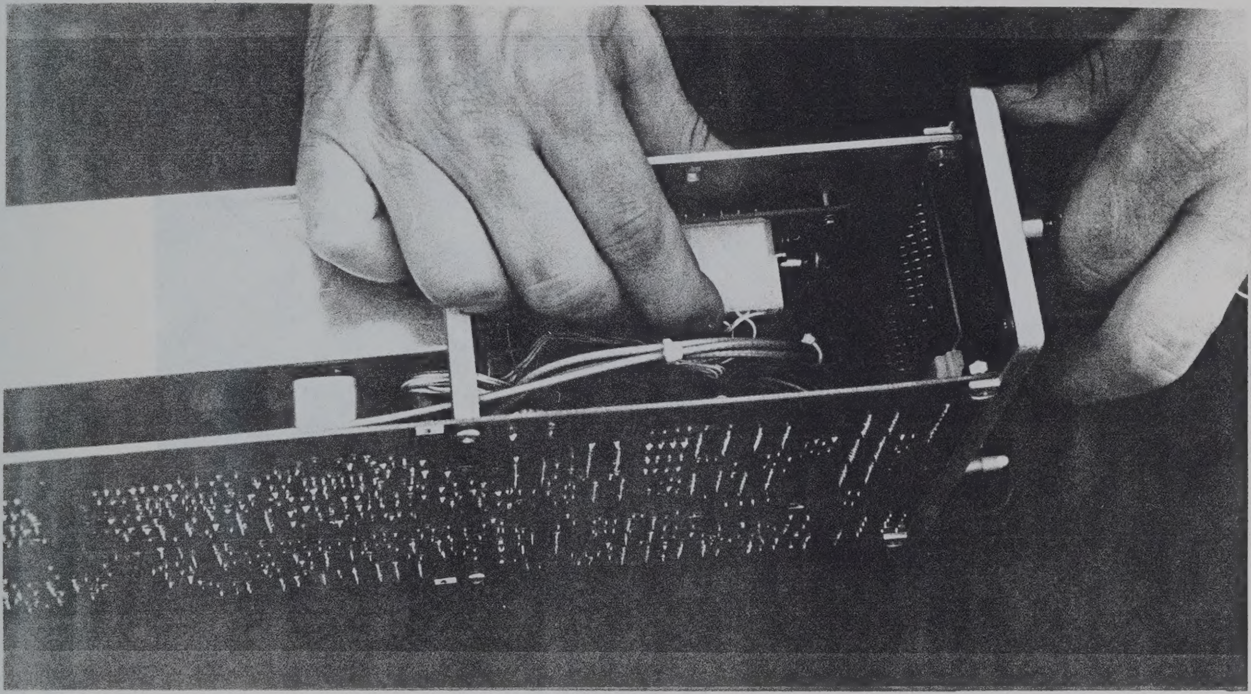


FIGURE NO. 10

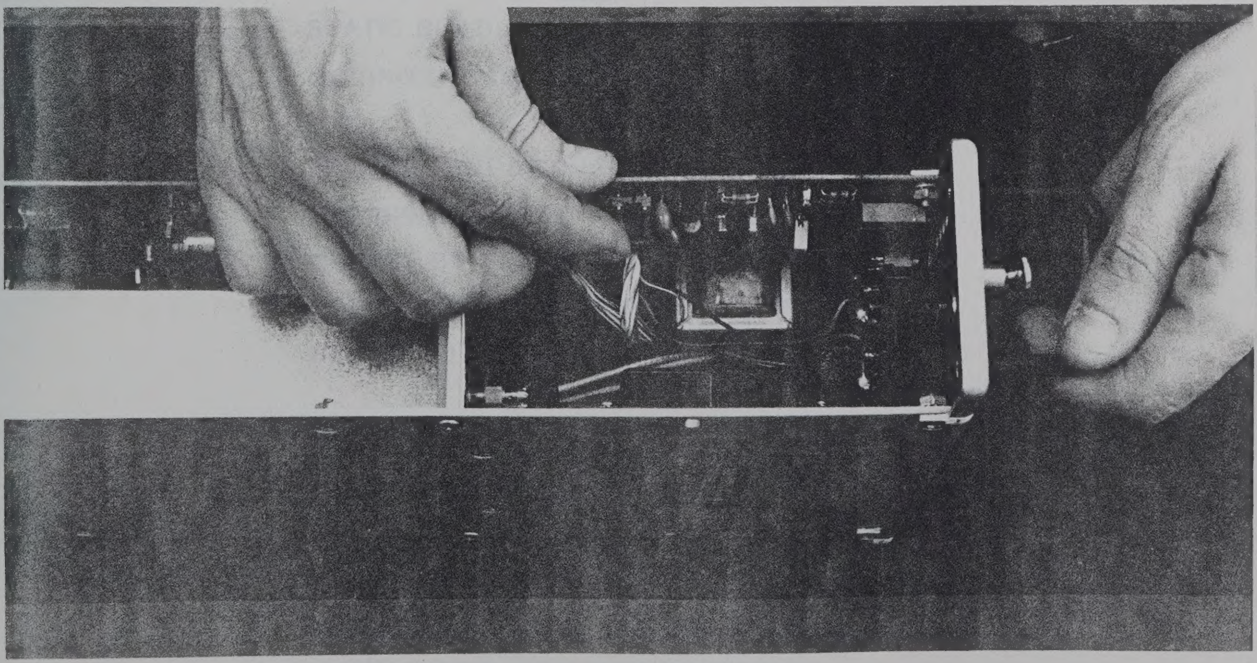


FIGURE NO. 11

10) Installation of Demodulator Back Into Shelf -

! IMPORTANT !

Touch yourself first to the rack to discharge any static build-up. While holding onto rack, slide demodulator into its slot. (Refer to Figure No. 12)

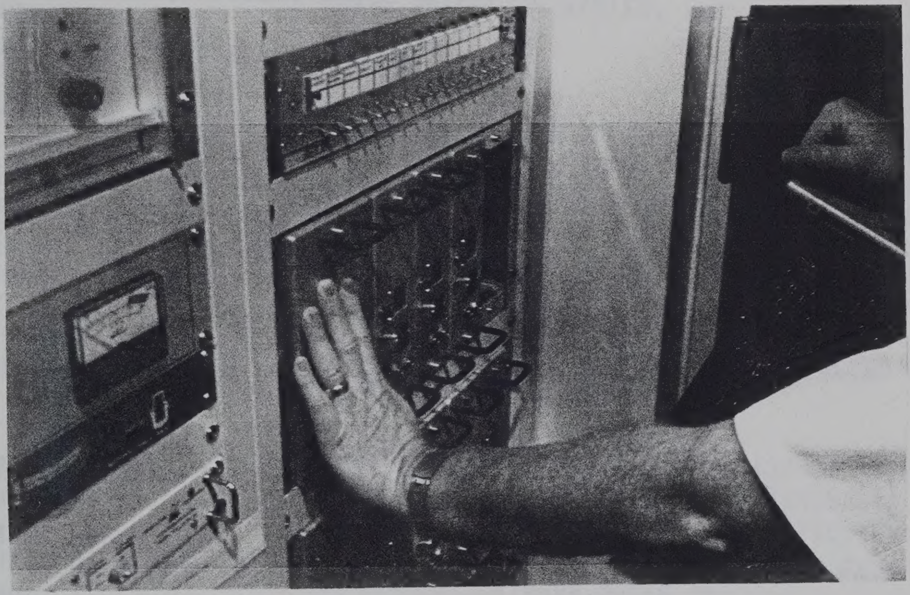


FIGURE NO. 12

IMPORTANT !!

IT IS IMPERATIVE NOT TO DISCHARGE ANY STATIC BUILDUP WHILE CARRYING OR MOVING THE DEMOD THROUGH THE DEMOD!!

GROUND AND DISCHARGE YOURSELF AND THE DEMOD AFTER WALKING ACROSS A CARPET BY TOUCHING THE RACK WITH YOUR HAND FIRST, BEFORE ALLOWING THE DEMOD TO COME IN CONTACT!!

FAILURE TO DO SO WILL RESULT IN SEVERE DAMAGE TO THE RECEIVER!!

THIS INCLUDES DISCHARGING YOURSELF BEFORE TOUCHING THE DEMOD WHEN PERFORMING THIS MODIFICATION!!

****

END/KEW

DACS TRANSMISSION TIME: 08-Nov-84   17:28:46 EASTERN TIME

MESSAGE # 1108D0.024

TO: ALL STATIONS, PGM DIRECTORS
FR: PETER BESHEER, CONCERT MUSIC SATELLITE SYSTEM, INC.
DT: NOVEMBER 8, 1984
RE: CONCERT MUSIC SATELLITE SYSTEM, INC.

WE ARE HAPPY TO ANNOUNCE THE CREATION OF CONCERT MUSIC SATELLITE SYSTEM, INC., (CMSS). CMSS HAS BEEN FORMED TO PROVIDE SATELLITE TRANSMISSION TO COMMERCIAL AND PUBLIC RADIO STATIONS PRIMARILY FOR PRODUCERS OF CLASSICAL MUSIC PROGRAMS. TO ACCOMPLISH THIS WE HAVE LEASED TWO FULL-TIME CHANNELS ON THE PUBLIC RADIO SATELLITE SYSTEM AT FREQUENCIES 86.4 AND 86.9 AT 16.5 DBW. (TO BE ~~DESIGNED~~ DESIGNATED BY CMSS CHANNELS 13 AND 14)

SOMETIME BETWEEN DECEMBER 1, 1984 AND JANUARY 1, 1985 THE FOLLOWING PROGRAMS WILL BE CARRIED EXCLUSIVELY ON THESE CHANNELS.

NEW YORK PHILHARMONIC
CLEVELAND ORCHESTRA
BOSTON SYMPHONY
CHICAGO SYMPHONY
PHILADELPHIA ORCHESTRA
BOSTON POPS
CARNEGIE HALL TONIGHT
MUSIC FROM INTERLOCHEN
MILWAUKEE SYMPHONY
LYRIC OPERA OF CHICAGO
CANADIAN OPERA
LINCOLN'S MUSIC IN AMERICA
ADVENTURES IN GOOD MUSIC
WEEKEND RADIO
DETROIT SYMPHONY
CLEVELAND INSTITUTE OF MUSIC
CITY CLUB FORUM
MICROLOGUS
AUDITORIUM ORGAN
MUSIC FROM OBERLIN

YOU WILL NOTE THAT THESE REPRESENT THE MAJORITY OF PROGRAMS CURRENTLY DISTRIBUTED BY WCLV SEAWAY PRODUCTIONS, WFMT PRODUCTIONS AND WCRB PRODUCTIONS. IN ADDITION WE ANTICIPATE THAT OVER THE NEXT SEVERAL MONTHS, A NUMBER OF OTHER PROGRAM SERIES BY INDEPENDENT PRODUCERS WILL BE ADDED TO THE SCHEDULE.

AS OF THE CHANGE-OVER DATE THESE PROGRAMS WILL NO LONGER BE AVAILABLE ON NPR CHANNELS 1 THROUGH 12.

THIS CHANGE WILL NOT AFFECT YOUR RELATIONSHIP WITH THE SYNDICATORS INVOLVED I.E., IF YOU ARE A SUBSCRIBER TO ADVENTURES IN GOOD MUSIC YOU WILL CONTINUE TO CONTRACT WITH WCLV SEAWAY PRODUCTIONS. IN OTHER WORDS YOU MUST CONTINUE TO OBTAIN CLEARANCES FROM THE INDIVIDUAL SYNDICATORS TO CARRY PROGRAMS OFFERED ON CMSS. IF YOU CURRENTLY HAVE CLEARANCE FOR A PARTICULAR PROGRAM, IT IS NOT NECESSARY FOR YOU TO DO ANYTHING.

****
END/KEW

DACS TRANSMISSION TIME: 08-Nov-84   17:28:46   EASTERN TIME

MESSAGE # 1108D0.024

TO: ALL STATIONS, PGM DIRECTORS
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CLEVELAND ORCHESTRA
BOSTON SYMPHONY
CHICAGO SYMPHONY
PHILADELPHIA ORCHESTRA
BOSTON POPS
CARNEGIE HALL TONIGHT
MUSIC FROM INTERLOCHEN

MILWAUKEE SYMPHONY
LYRIC OPERA OF CHICAGO
CANADIAN OPERA
LINCOLN'S MUSIC IN AMERICA
ADVENTURES IN GOOD MUSIC
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DETROIT SYMPHONY
CLEVELAND INSTITUTE OF MUSIC

CITY CLUB FORUM
MICROLOGUS
AUDITORIUM ORGAN
MUSIC FROM OBERLIN

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AS OF THE CHANGE-OVER DATE THESE PROGRAMS WILL NO LONGER BE AVAILABLE ON NPR CHANNELS 1 THROUGH 12.

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COORDINATION FOR THE SCHEDULING ON THE SATELLITE WILL BE HANDLED BY DENNIS MILLER, WCLV SEAWAY PRODUCTIONS IN CLEVELAND (216-241-0900). CUE SHEETS FOR THE INDIVIDUAL PROGRAMS WILL BE FURNISHED TO YOU BY MAIL FROM THE RESPECTIVE SYNDICATORS.

IN ORDER TO MAKE THE CHANGE OVER TO THESE NEW CHANNELS WITHOUT INTERRUPTION OF PROGRAMMING SERVICE, WE NEED YOUR COOPERATION. WE MUST DETERMINE IN THE NEXT SEVERAL DAYS IF YOUR STATION HAS AVAILABLE FOR USE DEMODS THAT CAN TUNE TO CHANNELS OUTSIDE OF NPR CHANNELS 1 THROUGH 12. IF YOUR STATION DOES NOT HAVE THIS EQUIPMENT, WE HAVE MADE ARRANGEMENTS TO MODIFY ONE PAIR OF YOUR DEMODS AT NO COST TO YOU. ADDITIONALLY, WE HAVE SIGNED AN AGREEMENT WITH NPR TO PROVIDE FULL MAINTENANCE SERVICE ON ALL MODIFIED DEMODS. THIS AGREEMENT PROVIDES THE SAME LEVEL OF SUPPORT AS FOR THE DEMODULATORS NOT MODIFIED.

PLEASE CALL AND LET US KNOW WHETHER YOUR STATION HAS THE NECESSARY EQUIPMENT OR NEEDS TO MODIFY ITS DEMODS:

CONTACT:

PETER BESHEER
CONCERT MUSIC SATELLITE SYSTEM, INC
271 MADISON AVENUE
NEW YORK, NY 10016
212-532-1900

OR

DENNIS MILLER
WCLV SEAWAY PRODUCTIONS
PENTHOUSE EAST TOWER TERMINAL
CLEVELAND, OH 44113
216-241-0900

****
END/KEW

	12/84	9/85
13,	86.4	54.7
14,	86.9	57.6
15,		
16.		

Channel 13&14 test
Dec 1, 1984 11A–

DACS TRANSMISSION TIME: 08-Nov-84   18:09:49   EASTERN TIME

MESSAGE # 1108D0.031
TO: FIRING LINE SUBSCRIBERS
FM: G. CHRISTINE TAYLOR, EXECUTIVE DIRECTOR
SECA RADIO DIVISION/VIA DISTRIBUTION
DT: TH 11/08/84
RE: FIRING LINE #1417 - "THE DALAI LAMA LOOKS BACK"

"IF WE KEEP OUR COURAGE AND OUR HOPE, HUMANITY CAN FACE ITS DIFFICULTIES AND PROBLEMS," SAYS HIS HOLINESS THE 14TH DALAI LAMA, SPIRITUAL AND TEMPORAL LEADER OF THE TIBETAN PEOPLE.

COORDINATION FOR THE SCHEDULING ON THE SATELLITE WILL BE HANDLED BY DENNIS MILLER, WCLV SEAWAY PRODUCTIONS IN CLEVELAND (216-241-0900). CUE SHEETS FOR THE INDIVIDUAL PROGRAMS WILL BE FURNISHED TO YOU BY MAIL FROM THE RESPECTIVE SYNDICATORS.

IN ORDER TO MAKE THE CHANGE OVER TO THESE NEW CHANNELS WITHOUT INTERRUPTION OF PROGRAMMING SERVICE, WE NEED YOUR COOPERATION. WE MUST DETERMINE IN THE NEXT SEVERAL DAYS IF YOUR STATION HAS AVAILABLE FOR USE DEMODS THAT CAN TUNE TO CHANNELS OUTSIDE OF NPR CHANNELS 1 THROUGH 12. IF YOUR STATION DOES NOT HAVE THIS EQUIPMENT, WE HAVE MADE ARRANGEMENTS TO MODIFY ONE PAIR OF YOUR DEMODS AT NO COST TO YOU. ADDITIONALLY, WE HAVE SIGNED AN AGREEMENT WITH NPR TO PROVIDE FULL MAINTENANCE SERVICE ON ALL MODIFIED DEMODS. THIS AGREEMENT PROVIDES THE SAME LEVEL OF SUPPORT AS FOR THE DEMODULATORS NOT MODIFIED.

PLEASE CALL AND LET US KNOW WHETHER YOUR STATION HAS THE NECESSARY EQUIPMENT OR NEEDS TO MODIFY ITS DEMODS:

CONTACT:

PETER BESHEER
CONCERT MUSIC SATELLITE SYSTEM, INC
271 MADISON AVENUE
NEW YORK, NY 10016
212-532-1900

OR

DENNIS MILLER
WCLV SEAWAY PRODUCTIONS
PENTHOUSE EAST TOWER TERMINAL
CLEVELAND, OH 44113
216-241-0900

****

END/KEW

	12/84	9/85
13,	86.4	54.7
14,	86.9	57.6
15,		
16,		

Channel 13&14 test
Dec 1, 1984 11A-

DACS TRANSMISSION TIME: 08-Nov-84 18:09:49 EASTERN TIME

MESSAGE # 1108D0.031
TO: FIRING LINE SUBSCRIBERS
FM: G. CHRISTINE TAYLOR, EXECUTIVE DIRECTOR
SECA RADIO DIVISION/VIA DISTRIBUTION
DT: TH 11/08/84
RE: FIRING LINE #1417 - "THE DALAI LAMA LOOKS BACK"

"IF WE KEEP OUR COURAGE AND OUR HOPE, HUMANITY CAN FACE ITS DIFFICULTIES AND PROBLEMS," SAYS HIS HOLINESS THE 14TH DALAI LAMA, SPIRITUAL AND TEMPORAL LEADER OF THE TIBETAN PEOPLE.

Basil
Pennyone
Herb
Mr. Shoenblum-customer service
338
216 - ~~564~~
4493
~~9093~~

CMSS

Dennis Miller

216-241-0900

non-tech

WGTE·WGLE
fm91

TOLEDO/LIMA PUBLIC BROADCASTING
136 Huron Street · P.O. Box 30 · Toledo, Ohio 43692 · (419) 243-3091

PROGRAM ____________________

SUBJECT ____________________

DATE RECORDED ____________ LENGTH ________

DATE BROADCAST ____________ TIME ________

OPEN ____________________

CLOSE ____________________

REEL ___ OF ___ TONE STEREO DBX AGC REWIND SAVE

H T H T H T H T H T H T H T H T

American Public Radio

Rhoda Marx

or

Joanne Eichten

612-221-1525

Main 612 293-5466

mon.
1:34 - AT LUNCH

CMSS - Basil Penzone
$40 onetime $60 maint fee

212-532-1900 / Peter Besher

from Karen Morse

from Alan Colwell

1-31-85

Channel 0 = 57.0
Left MHz

Channel 15 = 82.3
right MHz

December 12, 1984

Mr. Jim McEachern
Technical Facilities Manager
National Public Radio
2025 M Street, NW
Washington, DC 20036

Dear Jim:

We have modified two (2) of our Coastcom demodulators, using the conversion kit provided by Concert Music Satellite System, Inc., so that our station can tune to either the CMSS channels or the channels for the overnight service distributed by American Public Radio on the public radio satellite transponder.

We understand that this modification would normally make these demodulators ineligible for service by the NPR Repair Depot. However, we also understand and have been assured that CMSS and NPR have an agreement whereby these demodulators will be maintained by NPR at the same level of support as for non-modified demodulators.

We continue to be aware that any other modifications to our equipment not sanctioned by NPR would cause such equipment not to be eligible for repair by the NPR Satellite Repair Depot, under the policy which states:

> "... all stations (are) qualified to receive normal depot support services, provided the equipment module has not been modified or changed from the equipment that it type accepted by NPR."

Below are the serial numbers of the demodulators which we have modified:

1673
1742

Sincerely,

Alan G. Colwell

Chief Engineer or General Manager
Station Name and Address
WGTE FM
136 Huron St.
Toledo, Ohio 43604 419-243-3091

CMSS
CONCERT MUSIC SATELLITE SYSTEM, INC.

December 17, 1984

MR. THOMAS PAINE
WGTE/WGLE-FM
136 HURON STREET
TOLEDO, OH 45056

Dear Tom:

Enclosed is the conversion kit(s) we spoke about. This kit will expand your Coastcom 412 demodulators to sixteen (16) channels: two of the additional four channels (designated #13 and #14) will be the CMSS channels and the other two additional channels (#15 and #0) will carry the overnight service distributed by American Public Radio.

This kit has been developed to minimize risk to the equipment. So, please review the procedure carefully before starting, and follow the instructions closely. If you do run into a problem or have a question, we have set up a hotline for you to call: **(216) 338-4494.** Qualified technicians familiar with the conversion procedure will be standing by to answer any questions between 9am and 5pm ET.

I would like to emphasize that the modification we propose to have you perform with this conversion kit represents an exception to the standard NPR depot policy. As you know, modification of depot-eligible equipment normally removes it from eligibility for repair by the NPR Satellite Repair Depot. However, by special arrangement, CMSS (for itself and on behalf of American Public Radio) and NPR have agreed that NPR will provide depot repair service for the modified demodulators.

In order to qualify for this separate but identical depot service, **you must register the serial numbers of the modified demodulators with NPR and with CMSS** after you complete the conversion. For your convenience, I have included two (2) copies of the same letter, addressed to Mr. Jim McEachern, Technical Facilities Manager at NPR. **Just fill in the serial numbers of your modified demodulators on both copies of the letter, sign both copies showing station call letters and address and send one to Jim and one to me.** That's all you need to do.

Jim McEachern's facility is, thus, responsible for the maintenance of both modified and non-modified demoulators. His group has tackled the repair of more demods than most of us have seen, so we are very pleased to have reached this agreement with NPR. Please continue to rely on his expertise if a breakdown occurs.

If for any reason your engineer is not available or is not confident about making the modification, please call me immediately and we will make other arrangements for you. Also, it may be a good idea to keep any parts that are replaced.

Both CMSS and the overnight service distributed by American Public Radio plan to be switched to their respective channels no later than January 1, 1985. So, please complete the modification as soon as possible.

I want to thank you for your cooperation and patience. All of us at CMSS look forward to working with you in the new year and our best wishes for a healthy and successful 1985.

Yours truly,

Peter Besheer

Peter Besheer

PB:ln
enclosures

11/16/84

Alan -

I ordered this modification package when I sent in our contract yesterday.

The equipment will be sent to you by Dec 15.

We hope to start the overnight (Sun-Sat) service Jan 1.

TP

from Karen Morse

DACS TRANSMISSION TIME: 14-Jan-85 12:23:32 EASTERN TIME

MESSAGE # 0114D0.016
JANUARY 14, 1985

TO: ALL STATIONS PLANNING TO USE CMSS CHANNELS
FR: PETER BESHEER: CMSS, NEW YORK
RE: CMSS CHANNELS

WHEN DENNIS MILLER OR I SPOKE WITH YOU, AND IN MY LETTER TO EACH OF YOU, WE INDICATED THAT THE CMSS CHANNELS WOULD BEGIN OPERATING EARLY IN JANUARY. THAT START DATE IS NO LONGER POSSIBLE.

IN DECEMBER WE DISCOVERED THAT THE CHANNELS ASSIGNED TO CMSS WERE EXPERIENCING SUBSTANTIAL INTERFERENCE IN DOWNLINK TERMINALS. THIS INTERFERENCE IS COMING FROM AN ADJACENT SATELLITE, TELSTAR 301, AND WE HAVE IDENTIFIED THE INTERFERING CARRIER. SINCE THEN THE DISTRIBUTION DIVISION OF NPR AND WE HAVE BEEN WORKING TOGETHER TO FIND A GOOD AND PERMANENT SOLUTION.

WE BOTH FELT THAT A QUICK SOLUTION WAS POSSIBLE AND THAT CMSS WOULD BE ABLE TO START SERVICE IN EARLY JANUARY. WE HAVE CONCLUDED, HOWEVER, THAT A SOLUTION WILL TAKE MORE TIME THAN WE EXPECTED AND MAY INVOLVE MOVING THE CMSS SERVICE TO DIFFERENT FREQUENCIES.

IF YOU HAVE NOT AS YET MODIFIED YOUR DEMODS, PLEASE DO NOT MODIFY THEM. BUT KEEP THE KIT IN CASE THESE CHANNELS BECOME WORKABLE. THE ONLY EXCEPTIONS ARE THOSE STATIONS TAKING THE AMERICAN PUBLIC RADIO NETWORK OVERNIGHT SERVICE. THOSE STATIONS SHOULD COMPLETE THE MODIFICATION IN ORDER TO ACCESS THE APRN CHANNELS.

IN ORDER TO AVOID ANY INTERRUPTION OF PROGRAMMING SERVICE, ALL PROGRAMS DISTRIBUTED BY WCLV-CLEVELAND, WCRB-BOSTON, WFMT-CHICAGO, AND WQRS-DETROIT, WILL REMAIN ON THE CHANNELS NOW ASSIGNED FOR EACH PROGRAM.

WE ARE WORKING HARD TO FIND A SOLUTION THAT IS GOOD FOR BOTH YOU AND THE SYNDICATORS. WE WILL MAKE IT A POINT TO KEEP YOU UP TO DATE ON OUR PROGRESS AND GIVE YOU PLENTY OF NOTICE BEFORE PROGRAMMING IS SWITCHED TO OUR CHANNELS. THANK YOU FOR YOUR PATIENCE AND COOPERATION.

END/ES

alan

TIME

NEWS DIRECTORS

from Karen Morse

DACS TRANSMISSION TIME: 15-Nov-84 12:35:21 EASTERN TIME

MESSAGE # 1115D0.012
TO: STATION MANAGERS, CHIEF ENGINEERS, PROGRAM DIRECTORS
FM: RHODA MARX, AMERICAN PUBLIC RADIO/VIA DISTRIBUTION
DT: TH 11-15-84
RE: MODIFICATION OF DE-MODULATORS FOR SATELLITE CHANNELS 0 & 15

AS PREVIOUSLY ANNOUNCED, EFFECTIVE JANUARY 1, 1985 AMERICN PUBLIC RADIO'S OVERNIGHT MUSIC SERVICE WILL BE DISTRIBUTED ON SATELLITE CHANNELS 0 (ZERO) AND 15. EACH STATION WHICH SIGNS UP TO BROADCAST THE OVERNIGHT SERVICE WILL RECEIVE EQUIPMENT WHICH WILL MODIFY ONE PAIR OF DE-MODULATORS TO RECEIVE THIS TRANSMISSION. THIS MODIFICATION IS BEING COORDINATED BY CMBA IN NEW YORK, AND WILL NOT ONLY ALLOW YOU TO RECEIVE AMERICAN PUBLIC RADIO'S OVERNIGHT SERVICE ON CHANNELS 0 & 15, BUT THE SAME MODIFICATION WILL ALSO ENABLE YOU TO RECEIVE TRANSMISSIONS OF PROGRAMS DISTRIBUTED BY SEVERAL MAJOR COMMERCIAL SYNDICATORS ON CHANNELS 13 & 14.

YOU MAY HAVE ALREADY RECEIVED NOTIFICATION OF THE MODIFICATION "PACKAGE" FROM CMBA. YOU SHOULD NOTE THAT THIS MODIFICATION WILL NOT REQUIRE YOU TO SEND YOUR DEMODULATORS ANYWHERE. RATHER, YOU WILL RECEIVE THE EQUIPMENT WITH A COMPLETE SET OF INSTRUCTIONS WHICH WILL ALLOW YOUR ENGINEERS TO INSTALL THE NEW PROM UNITS RIGHT AT YOUR STATION IN APPROXIMATELY ONE HOUR. IT IS ALSO IMPORTANT TO NOTE THAT WE HAVE MADE CONTRACTUAL ARRANGEMENTS TO INSURE THAT IF YOU EXPERIENCE ANY TECHNICAL PROBLEMS WITH YOUR MODIFIED DEMODULATORS, THE EQUIPMENT WILL BE SERVICED THROUGH THE NPR DEPOT AT NO EXTRA CHARGE TO YOUR STATION.

AGAIN, IT SHOULD BE EMPHASIZED THAT THIS ONE MODIFICATION WILL SERVICE ALL FOUR NEW FREQUENCIES -- THOSE TO BE USED BY AMERICAN PUBLIC RADIO FOR THE OVERNIGHT SERVICE, AS WELL AS THOSE TO BE USED BY THE COMMERCIAL SYNDICATORS. HOWEVER, ALL PROGRAMMING DISTRIBUTED BY AMERICAN PUBLIC RADIO WITH THE EXCEPTION OF THE OVERNIGHT SERVICE WILL CONTINUE TO BE DISTRIBUTED ON THE OCCASIONAL USE CHANNELS 1 - 12.

IF YOU PLAN TO BROADCAST MUSIC THROUGH THE NIGHT OR JAZZ AFTER HOURS, BUT HAVE NOT AS YET SIGNED AND RETURNED A BROADCAST AGREEMENT FOR THESE SERVICES, PLEASE CALL ME AT 612-221-1525.

END

DACS TRANSMISSION TIME: 14-Jan-85 12:23:32 EASTERN TIME

MESSAGE # 0114D0.016
JANUARY 14, 1985

TO: ALL STATIONS PLANNING TO USE CMSS CHANNELS
FR: PETER BESHEER: CMSS, NEW YORK
RE: CMSS CHANNELS

WHEN DENNIS MILLER OR I SPOKE WITH YOU, AND IN MY LETTER TO EACH OF YOU, WE INDICATED THAT THE CMSS CHANNELS WOULD BEGIN OPERATING EARLY IN JANUARY. THAT START DATE IS NO LONGER POSSIBLE.

IN DECEMBER WE DISCOVERED THAT THE CHANNELS ASSIGNED TO CMSS WERE EXPERIENCING SUBSTANTIAL INTERFERENCE IN DOWNLINK TERMINALS. THIS INTERFERENCE IS COMING FROM AN ADJACENT SATELLITE, TELSTAR 301, AND WE HAVE IDENTIFIED THE INTERFERING CARRIER. SINCE THEN THE DISTRIBUTION DIVISION OF NPR AND WE HAVE BEEN WORKING TOGETHER TO FIND A GOOD AND PERMANENT SOLUTION.

WE BOTH FELT THAT A QUICK SOLUTION WAS POSSIBLE AND THAT CMSS WOULD BE ABLE TO START SERVICE IN EARLY JANUARY. WE HAVE CONCLUDED, HOWEVER, THAT A SOLUTION WILL TAKE MORE TIME THAN WE EXPECTED AND MAY INVOLVE MOVING THE CMSS SERVICE TO DIFFERENT FREQUENCIES.

IF YOU HAVE NOT AS YET MODIFIED YOUR DEMODS, PLEASE DO NOT MODIFY THEM. BUT KEEP THE KIT IN CASE THESE CHANNELS BECOME WORKABLE. THE ONLY EXCEPTIONS ARE THOSE STATIONS TAKING THE AMERICAN PUBLIC RADIO NETWORK OVERNIGHT SERVICE. THOSE STATIONS SHOULD COMPLETE THE MODIFICATION IN ORDER TO ACCESS THE APRN CHANNELS.

IN ORDER TO AVOID ANY INTERRUPTION OF PROGRAMMING SERVICE, ALL PROGRAMS DISTRIBUTED BY WCLV-CLEVELAND, WCRB-BOSTON, WFMT-CHICAGO, AND WQRS-DETROIT, WILL REMAIN ON THE CHANNELS NOW ASSIGNED FOR EACH PROGRAM.

WE ARE WORKING HARD TO FIND A SOLUTION THAT IS GOOD FOR BOTH YOU AND THE SYNDICATORS. WE WILL MAKE IT A POINT TO KEEP YOU UP TO DATE ON OUR PROGRESS AND GIVE YOU PLENTY OF NOTICE BEFORE PROGRAMMING IS SWITCHED TO OUR CHANNELS. THANK YOU FOR YOUR PATIENCE AND COOPERATION.

END/ES

DACS TRANSMISSION TIME: 16-Nov-84 16:35:52 EASTERN TIME

MESSAGE # 1116D0.040
TO STATION MANAGERS, CHIEF ENGINEERS, PROGRAM DIRECTORS
FM: RHODA MARX, AMERICAN PUBLIC RADIO/VIA DISTRIBUTION
DT: FR 11-16-84
RE: MODIFICATION OF DEMODULATORS FOR SATELLITE CHANNELS 0 & 15

AS PREVIOUSLY ANNOUNCED, EFFECTIVE JANUARY 1, 1985 AMERICN PUBLIC RADIO'S OVERNIGHT MUSIC SERVICE WILL BE DISTRIBUTED ON SATELLITE CHANNELS 0 (ZERO) AND 15. EACH STATION WHICH SIGNS UP TO BROADCAST THE OVERNIGHT SERVICE WILL RECEIVE EQUIPMENT WHICH WILL MODIFY ONE PAIR OF DEMODULATORS TO RECEIVE THIS TRANSMISSION. THIS MODIFICATION IS BEING COORDINATED BY CMBA IN NEW YORK, AND WILL NOT ONLY ALLOW YOU TO RECEIVE AMERICAN PUBLIC RADIO'S OVERNIGHT SERVICE ON CHANNELS 0 & 15, BUT THE SAME MODIFICATION WILL ALSO ENABLE YOU TO RECEIVE TRANSMISSIONS OF PROGRAMS DISTRIBUTED BY SEVERAL MAJOR COMMERCIAL SYNDICATORS ON CHANNELS 13 & 14.

YOU MAY HAVE ALREADY RECEIVED NOTIFICATION OF THE MODIFICATION "PACKAGE" FROM CMBA. YOU SHOULD NOTE THAT THIS MODIFICATION WILL NOT REQUIRE YOU TO SEND YOUR DEMODULATORS ANYWHERE. RATHER, YOU WILL RECEIVE THE EQUIPMENT WITH A COMPLETE SET OF INSTRUCTIONS WHICH WILL ALLOW YOUR ENGINEERS TO INSTALL THE NEW PROM UNITS RIGHT AT YOUR STATION IN APPROXIMATELY ONE HOUR. IT IS ALSO IMPORTANT TO NOTE THAT WE HAVE MADE CONTRACTUAL ARRANGEMENTS TO INSURE THAT IF YOU EXPERIENCE ANY TECHNICAL PROBLEMS WITH YOUR MODIFIED DEMODULATORS, THE EQUIPMENT WILL BE SERVICED THROUGH THE NPR DEPOT AT NO EXTRA CHARGE TO YOUR STATION.

AGAIN, IT SHOULD BE EMPHASIZED THAT THIS ONE MODIFICATION WILL SERVICE ALL FOUR NEW FREQUENCIES -- THOSE TO BE USED BY AMERICAN PUBLIC RADIO FOR THE OVERNIGHT SERVICE, AS WELL AS THOSE TO BE USED BY THE COMMERCIAL SYNDICATORS. HOWEVER, ALL PROGRAMMING DISTRIBUTED BY AMERICAN PUBLIC RADIO WITH THE EXCEPTION OF THE OVERNIGHT SERVICE WILL CONTINUE TO BE DISTRIBUTED ON THE OCCASIONAL USE CHANNELS 1 - 12.

IF YOU PLAN TO BROADCAST MUSIC THROUGH THE NIGHT OR JAZZ AFTER HOUIRS, BUT HAVE NOT AS YET SIGNED AND RETURNED A BROADCAST AGREEMENT FOR THESE SERVICES, PLEASE CALL ME AT 612-221-1525.

END

DACS TRANSMISSION TIME: 16-Nov-84 16:46:38 EASTERN TIME

MESSAGE # 1116D0.042

Alan

CMSS
CONCERT MUSIC SATELLITE SYSTEM, INC.

SEP - 6 1985

August 29, 1985

THOMAS PAINE
RADIO STATION WGTE/WGLE-FM
136 HURON STREET
TOLEDO, OH 43692

Dear THOMAS:

Attached is a copy of the DACS message I sent to you on January 14th of this year updating you on the technical difficulties CMSS was experiencing.

We have finally solved the interference problem by moving to alternate frequencies - 54.7 and 57.6. Full service will begin on Monday, September 30, 1985.

To update you, all programming distributed by WCLV-Cleveland, WFMT-Chicago, WCRB-Boston as well as selected other programs will be distributed exclusively on these channels. These programs include:

- Cleveland Orchestra
- New York Philharmonic
- Chicago Symphony
- Lincoln's Music In America
- Chicago Lyric Opera
- Carnegie Hall Tonight
- Philadelphia Orchestra
- Adventures in Good Music
- Boston Symphony
- etc., etc., etc.

For further information, please contact the distributor of each specific program.

Enclosed is another copy of the instruction booklet and two new Proms. We already sent you a complete tool kit with the first set of Proms. This kit will expand your Coastcom 412 demodulators to sixteen (16) channels: two of the additional four channels (designated #13 and #14) will be the CMSS channels and the other two additional channels (#15 and #0) will carry the overnight service distributed by American Public Radio.

CMSS
CONCERT MUSIC SATELLITE SYSTEM, INC.

This kit has been developed to minimize risk to the equipment. So, please review the procedure carefully before starting, and follow the instructions closely. If you do run into a problem or have a question, we have set up a hotline for you to call: **(216) 338-4493.** Qualified technicians familiar with the conversion procedure will be standing by to answer any questions between 9am and 5pm ET.

I would like to emphasize that the modification we propose to have you perform with this conversion kit represents an exception to the standard NPR depot policy. As you know, modification of depot-eligible equipment normally removes it from eligibility for repair by the NPR Satellite Repair Depot. However, by special arrangement, CMSS (for itself and on behalf of American Public Radio) and NPR have agreed that NPR will provide depot repair service for the modified demodulators.

In order to qualify for this separate but identical depot service, **you must register the serial numbers of the modified demodulators with NPR and with** CMSS after you complete the conversion. For your convenience, I have included two (2) copies of the same letter, addressed to Mr. Jim McEachern, Technical Facilities Manager at NPR. **Just fill in the serial numbers of your modified demodulators on both copies of the letter, sign both copies showing station call letters and address and send one to Jim and one to me.** That's all you need to do.

Jim McEachern's facility is, thus, responsible for the maintenance of both modified and non-modified demodulators. His group has tackled the repair of more demods than most of us have seen, so we are very pleased to have reached this agreement with NPR. Please continue to rely on his expertise if a breakdown occurs.

Again, CMSS will start service on **Monday, September 30, 1985.** Test tones will be broadcast weeks of September 16th and September 23rd. So please complete the modification as soon as possible in order to test your equipment before start.

I want to thank you for your cooperation and patience. All of us at CMSS look forward to a long and successful relationship.

Yours truly,

Peter Besheer

Peter Besheer
President

PB:jt
enclosures

Date:
October 28, 1985

Mr. Jim McEachern
Technical Facilities Manager
National Public Radio
2025 M Street, NW
Washington, DC 20036

Dear Jim:

We have modified two (2) of our Coastcom demodulators, using the conversion kit provided by Concert Music Satellite System, Inc., so that our station can tune to either the CMSS channels or the channels for the overnight service distributed by American Public Radio on the public radio satellite transponder.

We understand that this modification would normally make these demodulators ineligible for service by the NPR Repair Depot. However, we also understand and have been assured that CMSS and NPR have an agreement whereby these demodulators will be maintained by NPR at the same level of support as for non-modified demodulators.

We continue to be aware that any other modifications to our equipment not sanctioned by NPR would cause such equipment not to be eligible for repair by the NPR Satellite Repair Depot, under the policy which states:

> "...all stations (are) qualified to receive normal depot support services, provided the equipment module has not been modified or changed from the equipment that it type accepted by NPR."

Below are the serial numbers of the demodulators which we have modified:

#2387

#2446

Sincerely,

Alan Colwell

Chief Engineer or General Manager
Station Name and Address

WGTE FM

136 N. Huron St.

Toledo, Ohio 43604

File

MESSAGE # 0114D0.016
JANUARY 14, 1985

TO: ALL STATIONS PLANNING TO USE CMSS CHANNELS
FR: PETER BESHEER: CMSS, NEW YORK
RE: CMSS CHANNELS

WHEN DENNIS MILLER OR I SPOKE WITH YOU, AND IN MY LETTER TO EACH OF YOU, WE INDICATED THAT THE CMSS CHANNELS WOULD BEGIN OPERATING EARLY IN JANUARY. THAT START DATE IS NO LONGER POSSIBLE.

IN DECEMBER WE DISCOVERED THAT THE CHANNELS ASSIGNED TO CMSS WERE EXPERIENCING SUBSTANTIAL INTERFERENCE IN DOWNLINK TERMINALS. THIS INTERFERENCE IS COMING FROM AN ADJACENT SATELLITE, TELSTAR 301, AND WE HAVE IDENTIFIED THE INTERFERING CARRIER. SINCE THEN THE DISTRIBUTION DIVISION OF NPR AND WE HAVE BEEN WORKING TOGETHER TO FIND A GOOD AND PERMANENT SOLUTION.

WE BOTH FELT THAT A QUICK SOLUTION WAS POSSIBLE AND THAT CMSS WOULD BE ABLE TO START SERVICE IN EARLY JANUARY. WE HAVE CONCLUDED, HOWEVER, THAT A SOLUTION WILL TAKE MORE TIME THAN WE EXPECTED AND MAY INVOLVE MOVING THE CMSS SERVICE TO DIFFERENT FREQUENCIES.

IF YOU HAVE NOT AS YET MODIFIED YOUR DEMODS, PLEASE DO NOT MODIFY THEM. BUT KEEP THE KIT IN CASE THESE CHANNELS BECOME WORKABLE. THE ONLY EXCEPTIONS ARE THOSE STATIONS TAKING THE AMERICAN PUBLIC RADIO NETWORK OVERNIGHT SERVICE. THOSE STATIONS SHOULD COMPLETE THE MODIFICATION IN ORDER TO ACCESS THE APRN CHANNELS.

IN ORDER TO AVOID ANY INTERRUPTION OF PROGRAMMING SERVICE, ALL PROGRAMS DISTRIBUTED BY WCLV-CLEVELAND, WCRB-BOSTON, WFMT-CHICAGO, AND WORS-DETROIT, WILL REMAIN ON THE CHANNELS NOW ASSIGNED FOR EACH PROGRAM.

WE ARE WORKING HARD TO FIND A SOLUTION THAT IS GOOD FOR BOTH YOU AND THE SYNDICATORS. WE WILL MAKE IT A POINT TO KEEP YOU UP TO DATE ON OUR PROGRESS AND GIVE YOU PLENTY OF NOTICE BEFORE PROGRAMMING IS SWITCHED TO OUR CHANNELS. THANK YOU FOR YOUR PATIENCE AND COOPERATION.

END/ES

DACS TRANSMISSION TIME: 16-Jan-85   12:46:12 EASTERN TIME

alan

MESSAGE # 0116D0.015

TO: STATION MANAGERS, CHIEF ENGINEERS, PROGRAM DIRECTORS
FR: DIANE ENGLER, AMERICAN PUBLIC RADIO/VIA DIST CTR
DT: WE 01/16/85
RE: UPDATE ON MODIFICATION OF DEMODULATORS FOR SATELLITE CHANNELS 0 & 15 AND TENTATIVE DATE OF SWITCHOVER TO NEW CHANNELS

AS INDICATED EARLIER VIA DACS, WE HAVE SET FEBRUARY 1, 1985, AS THE DATE ON WHICH AMERICAN PUBLIC RADIO INTENDS TO MOVE "MUSIC THROUGH THE NIGHT" AND "JAZZ AFTER HOURS" TO THE NEW CHANNELS 0 (ZERO) AND 15. OUR PRELIMINARY TESTING SHOWS THAT THESE CHANNELS WILL BE READY FOR USE ON FEBRUARY 1. THOSE STATIONS WHICH CARRY, OR PLAN TO CARRY, THE OVERNIGHT MUSIC SERVICE FROM AMERICAN PUBLIC RADIO SHOULD MODIFY THEIR DEMODS WITH THE CMSS EQUIPMENT WHICH WAS SENT LAST MONTH.

IN A DACS SENT EARLIER BY CMSS, IT WAS NOTED THAT CHANNELS 13 AND 14 ARE EXPERIENCING INTERFERENCE. PLEASE BE AWARE THAT THIS PROBLEM DOES NOT CARRY OVER TO CHANNELS 0 AND 15, AND STATIONS SHOULD COMPLETE THE MODIFICATION IF THEY WISH TO ACCESS THE OVERNIGHT SERVICE.

PLEASE NOTE THAT ALL PROGRAMMING DISTRIBUTED BY AMERICAN PUBLIC RADIO WITH THE EXCEPTION OF THE OVERNIGHT SERVICE WILL CONTINUE TO BE FED ON THE OCCASIONAL USE CHANNELS 1 - 1. ALSO PLEASE BE AWARE THAT WE HAVE MADE CONTRACTUAL ARRANGEMENTS TO INSURE THAT IF YOU EXPERIENCE ANY TECHNICAL PROBLEMS WITH YOUR MODIFIED DEMODULATORS, THE EQUIPMENT WILL BE SERVICED THROUGH THE NPR DEPOT AT NO EXTRA CHARGE TO YOUR STATION.

IF YOU HAVE RETURNED A BROADCAST AGREEMENT FOR THE OVERNIGHT MUSIC SERVICE, BUT YOU HAVE NOT YET RECEIVED YOUR MODIFICATION "PACKAGE" FROM CMDA, PLEASE CALL DIANE ENGLER AT (612) 293-5417 IMMEDIATELY. IF YOU PLAN TO CARRY THE OVERNIGHT MUSIC SERVICE IN THE NEAR FUTURE BUT HAVE NOT YET SENT IN YOUR BROADCAST AGREEMENT, PLEASE CALL THE NUMBER LISTED ABOVE.

END.

DACS TRANSMISSION TIME: 16-Jan-85   12:51:37 EASTERN TIME

MESSAGE # 0116D0.016
TO: All Stations
FR: NPR Telecom/Keator
DT: Wed 16 Jan 85

FROM: Pete Loewenstein, NPR Distribution
DATE: January 18, 1985
SUBJECT: Response to Station Inquires Concerning CMSS

At its January 17, 1985, meeting, the NPR Board Technology/Distribution Committee discussed the apparent confusion that has developed within the public radio system during the last several months regarding the services NPR Distribution is providing to the Classical Music Satellite System (CMSS). The Committee directed staff to provide a DACS to all stations which will clarify NPR's relationship with CMSS, and the nature of the services being provided, in response to the large number of station inquiries NPR has received concerning this customer.

-- CMSS is a commercial entity which has a contract with NPR for the lease of two full-time satellite channels, outside public radio channels 1-12. CMSS intends to use these channels to distribute syndicated classical music programming to both commercial and public radio stations. Much of the programming CMSS intends to distribute on its full-time channels is currently being distributed to public radio stations directly by the program syndicators on public radio channels 1-12.

-- CMSS chose to lease other frequencies on the satellite, on a full-time basis and for a period of two years, rather than to share channels 1-12 with other public radio users. CMSS has never been denied access to the 12 regular public radio channels. It has been offered them on the same basis as all other users.

-- From the outset of NPR's discussions with CMSS last spring, CMSS was made aware that channels outside 1-12 were not supported by Netcue, scheduling, and other operating support systems. NPR advised CMSS repeatedly that many public radio stations would have difficulty capturing CMSS-distributed programs without the benefit of Netcue and other related services if it chose not to utilize public radio channels 1-12. CMSS determined it did not require these support services.

-- The Satellite Operations Support System (SOSS), which includes Netcue and the program scheduling system, is designed to support only the use of public radio channels 1-12. Support of other channels/frequencies by these systems is presently impossible due to limitations of the system hardware and software, both at the system head-end and at the public radio stations. While SOSS support to additional channels is technically feasible, it cannot be done without massive redesign of the existing system, nor without substantial expense to the entire public radio system. Since the utilization of public running at less than 50% of capacity, there is no apparent justification for expanding these services to support additional channels. Further, expansion of these services to accomodate the needs of a commercial space customer should not be at the expense of the public radio system.

-- CMSS planned to supply each station taking its service, both commercial and public stations, with special demodulators configured to its different transmission format and tuned to its leased frequencies. This plan was ultimately changed. CMSS instead decided to adopt the standard NPR transmission format and require the public radio stations to either purchase additional demodulators or modify their existing equipment to receive the CMSS service. (The commercial stations were still supplied with the necessary equipment at no cost.)

-- As soon as NPR learned of the CMSS plan to modify equipment at the public radio stations, NPR cautioned CMSS, and alerted the stations, that the modifie
ng Depot spares pool and that CMSS would have to make
separate maintenance arrangements for the modified equipment at its own expense. NPR advised CMSS against its modification plan.

-- At CMSS's request, NPR later agreed, for the convenience of the public stations, to establish within the NPR Depot a separate spares pool and maintenance arrangement for the modified equipment, at CMSS's expense. CMSS agreed to supply the Depot with replacement spares configured for its channels, and to assume the financial responsibility for maintaining the modified equipment. It was NPR's intent to keep the separate maintenance arrangement "transparent" to the stations by having it handled at the same location as their other satellite equipment and by following the same procedures for troubleshooting, shipping, replacement, and repair. While CMSS and NPR have reached agreement on the terms of this arrangement and the stations have begun registering their modified demodulators with the Depot, CMSS has yet to supply the Depot with the required equipment spares. Until CMSS supplies the Depot with appropriate equipment spares, the Depot will handle the CMSS-modified demods on a "repair and return" basis.

It is hoped that this information will eliminate much of the confusion that stations have expressed recently concerning NPR Distribution and the CMSS service. NPR is continuing to work closely with CMSS toward the establishment of their new service, and I urge you to contact the Distribution Division, CMSS, or the program syndicators if further clarification of these issues is required.

DACS TRANSMISSION TIME: 25-Sep-85   12:44:21   EASTERN TIME

MESSAGE # 0925D0.014

TO: ALL NPR/PBS COLOCATED RECEIVE SITES
FR: WILLIAM L. MYERS, CHIEF ENGINEER, WVIA TV/FM
DT: WE 09/25/85
RE: SUBSTITUTION OF ROCKWELL 64U2 (NRP) DOWNCONVERTER USING (TV)
    FREQUENCY AGILE RECEIVER 55U3.

FM - NPR EARTH STATIONS HAVING ONELY ONE ROCKWELL 64U2 DOWNCONVERTER NEED NOT FEAR THE END OF THE WORLD IN THE EVENT THIS DOWNCONVERTER FAILS PROVIDED THEY ARE COLOCATED TO AND HAVE GOOD RELATION WITH THEIR PBS-TV EARTH STATION.

IF THE ROCKWELL 64U2 (NPR) DOWNCONVERTER SHOULD FAIL IT CAN BE SUBSTITUTED WITH AN UNUSED TV ROCKWELL 55U3 FREQUENCY AGILE RECEIVER USING THE FOLLOWING PROCEDURE:

A. ON THE 55U3 RECEIVER, REMOVE THE RIGID BNC JUMPER FROM THE IF FIL EQ MODULE 70 MHZ OUT TO THE IF UNIT DISCR MODULE 70 MHZ IN.

B. THE 70 MHZ OUT P2 ON THE 64U2 DOWNCONVERTER NORMALLY FEEDS A SPLITTER. DISCONNECT THE INPUT TO THE SPLITTER FROM THE 64U2 DOWNCONVERTER AND CONNECT A LENGTH OF RG 59 FROM THE SPLITTER INPUT TO THE IF FILTER EQ MODULE 70 MHZ OUT ON THE FREQUENCY AGILE RECEIVER 55U3.

3,760GHz

C. SET THE FREQUENCY OF THE 55U3 RECEIVER TO 3760 MHZ AND EXECUTE.

NPR PROGRAMMING SHOULD THEN RETURN TO YOUR STATION AS LONG AS TV CAN WITHOUT THAT RECEIVER.

END

DACS TRANSMISSION TIME: 31-Dec-85   15:07:21 EASTERN TIME

MESSAGE # 1231D0.023

TO: ALL STATION CHIEF ENGINEERS

FROM: MARK MURPHY, NPR SATELLITE MAINTENANCE DEPOT

DATE: December 31, 1985

RE: AFC PROBLEMS WITH MODIFIED COASTCOM DEMODULATORS

There is a pattern of trouble showing up recently involving Coastcom demodulators which have been modified to receive services other than Public Radio channels. This problem can also occur with Coastcom 412-360 agile demodulators and even with Microdyne demodulators. This trouble arises from a combination of minor equipment misadjustment and the normal operating practices of some users of our transponder. Here is what usually happens:

1. A demod is tuned to receive a certain channel and works well.

2. The operators of that channel finish service for the day and turn off that carrier.

3. The demodulator squelch is set too low and does not shut down when the carrier drops.

4. Because the carrier is not replaced by one from another uplink, the AFC circuit in the demod begins to pull the tuning off-frequency toward the closest existing carrier nearby.

5. From this point, one of two things may happen:

DACS TRANSMISSION TIME: 31-Dec-85 15:07:21 EASTERN TIME

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5. From this point, one of two things may happen:

> A. The AFC circuit may reach the end of its range and come unlocked. The AFC light will go out and the audio output will be muted. The carrier light remains lit. The AFC then locks to a carrier or noise outside its operating range and stays there. Even the return of the desired carrier will not make it recover since it is still locked to something else.
>
> B. If the AFC finds another carrier within its operating range, it will lock to that carrier. Both the Carrier and the AFC light will remain lighted and the audio from this other carrier will appear at the output. In this case also, the return of the proper carrier will not cause the demod to recover since it is locked to another carrier.

The solution to this problem is to adjust the squelch so that the demod squelches when the carrier is not there. This causes the AFC to center itself and lock to the center of its tuning range, where it will see the proper carrier when it comes back. This is important.

****

TO OPERATE PROPERLY, A COASTCOM DEMOD MUST SQUELCH WHEN THE CARRIER DROPS !

****

This problem may be increased at some stations by high frequency tilt in the 70 Mhz IF line. This causes the noise floor at the low end of the band to be higher that that at the high end. If the squelch is adjusted at the high end (such as Public Radio channel 1), the demod may not squelch properly at the low end.

Stations which, in the past, have used only Public Radio channels may never have seen this problem, since there is always a carrier present on all Public Radio channels. There have been a few reports of stations receiving channel 4 instead of 5 and such, since these channels are close enough to do this on some demods, but usually the brief drop caused by switching uplinks in the Public Radio system is too short for a demod to wander off.

If your station has had trouble with demods either locking to the wrong carrier or losing AFC lock when the carrier was dropped, it is important to adjust the squelch settings on these demods. The best way to do this is to call the MOTC at NPR (202-822-2410) to request a vacant channel for squelch setting. If a channel is available, the MOTC operator will drop the carrier for a short period, usually about 15 minutes. All demods should be tuned to this vacant channel and their squelch controls adjusted as follows:

1. Turn the squelch control counter-clockwise until the carrier light lights with no carrier present.

2. Immediately turn the control clockwise until the carrier light just goes out.

3. Continue turning the control clockwise for another 1/4 turn.

4. Retune the demod to an active channel to be sure that the carrier light does come on.

It is best if this proceedure is performed with a higher numbered Public Radio channel as the inactive channel (chan 7-12) since these channels are in the lower frequency part of the transponder. As an alternative, a channel of another service can be used when their carrier is not active. In the case of a fully agile demod, any unused frequency may be used to make these adjustments.

As more services are added to the NPR's transponder, with various methods of operation, it becomes increasingly important that these adjustments be properly set at all stations. Since the level for squelch setting is different at each station, the station engineer must make these adjustments at each site. If you continue to have problems after making these adjustments, then call the Satellite Repair Depot at (202) 822-2650 for additional help.

END

A. The AFC circuit may reach the end of its range and come unlocked. The AFC light will go out and the audio output will be muted. The carrier light remains lit. The AFC then locks to a carrier or noise outside its operating range and stays there. Even the return of the desired carrier will not make it recover since it is still locked to something else.

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WFMT, Inc.
Three Illinois Center
303 East Wacker Drive
Chicago, Illinois 60601
(312) 565-5052

Kathleen Jenkins
Syndication Coordinator

3 February 86

Dear CMSS Broadcaster:

A number of you have reported various and periodic difficulties -- e.g. drop-out and electronic noise -- with your reception of programs via the CMSS channels.

The problem has proved to be a complex one and at least partly attributable to technical problems which, as of January 28, appear to be solved. So that we may be assured that this is the case, please note the following suggestions:

1) Call me immediately if you experience further transmission problems and be prepared to describe the nature of the problem, its duration, and exactly where it occurs in the program.

2) Record and log the program -- even if you do not intend to use it for broadcast (we will, of course, schedule a make-good or provide you with a tape in the event of a faulty transmission).

By observing the above points you will provide us with the information we need to address and solve the problem quickly. We are working as closely as possible with NPR to ensure a permanent solution to these difficulties and very much appreciate your patience in the matter.

Sincerely yours,

Kathleen Jenkins

Kathleen Jenkins
Syndication Coordinator

KJ:jt

CC: Mr. Dennis Miller
Mr. Gordon Carter
Mr. Ray Nordstrand
Mr. Rich Marschner
Mr. Dean Grier

(2:02:20)

CLOSING ANNOUNCEMENTS, LEADING TO CLOSE CUE: "WE HOPE YOU'LL JOIN US FOR THIS NEXT LIVE CHICAGO SYMPHONY BROADCAST." 01:15 1:54:35 (2:03:35)

END/WJ

DACS TRANSMISSION TIME: 26-Apr-85 12:02:47 EASTERN TIME

MESSAGE # 0426D0.012

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ATTENTION: ENGINEERING

To: All Stations, Chief Engineers, Operations Managers
Fr: Greg Monti, Satellite Maintenance Depot, NPR
Dt: 26 April 1985
Re: DEMODULATOR SQUELCH ADJUSTMENT PROCEDURE

The MOTC and the Maintenance Depot frequently receive calls from stations who are not receiving particular programs and who believe that their satellite equipment is defective. Often, the problem is that the SQUELCH controls on the demodulators are not set correctly, causing the demodulator's audio output to mute when a satellite carrier operating at a power slightly lower than normal is tuned in.

Here's how to adjust yours:

FOR COASTCOM 412 "BASIC" (12- or 16-channel) DEMODULATORS:

(1) Call the MOTC at 800-235-1212 extension 2401 or 202-822-2401, state that you are a station wishing to adjust squelch, and ask that a public radio channel that's not being used be dropped from the satellite for about 15 minutes. Once the channel is dropped, tune all your demodulators to that channel. (This procedure will be accompanied by loud white noise at the audio output of each demod, so keep your monitor speakers low.) Do the following for each demod.

(2) If the CXR lamp on the front panel of the demod is on, skip to step (3). If it's not on, turn the SQUELCH control counterclockwise until the CXR lamp comes on.

(4) Note the position of the SQUELCH control and continue turning it about 1/4 to 1/2 turn clockwise.

(5) Tune the demodulator to several known operating channels to see that it receives program audio successfully.

FOR COASTCOM 412-360 DEMODULATORS:

(1) Tune the demodulator to an unused frequency near the low end of the band. 52.0 MHz is a good choice.

(2) If the CXR lamp on the front panel of the demod is on, skip to step (3). If it's not on, turn the SQUELCH control counterclockwise until the CXR lamp comes on.

(3) Turn the SQUELCH control clockwise until the CXR lamp just goes out.

(4) Note the position of the SQUELCH control and continue turning it about 1/4 to 1/2 turn clockwise.

(5) Tune the demodulator to several known operating channels to see that it receives program audio successfully.

FOR MICRODYNE 1100-PDCR-3 and 1100-PCDR-5 DEMODULATORS:

(1) Set the demodulator to the bandwidth at which it's most often used. Tune the demod to an unused frequency near the low end of the band. 52.00 MHz is a good choice.

(2) If the CARRIER lamp on the front panel of the demod is on STEADILY, skip to step (3). If it's FLASHING, turn the MUTE control counterclockwise until the CARRIER lamp stays lit STEADILY.

(3) Turn the MUTE control clockwise until the CARRIER lamp begins flashing regularly. Irregular flashing is not good enough.

(4) Note the position of the MUTE control and continue turning it about 1/8 turn clockwise.

(5) Tune the demodulator to several known operating channels to see that it receives program audio reliably.

FOR McMARTIN SDR-1 DACS/NETCUE DEMODULATORS:

You'll need a DC voltmeter for this.

DATE 12-9-80 TAPE MACHINE RESPONSE DATA MACHINE ________

	PLAYBACK RESPONSE				RECORD RESPONSE			
	7 1/2 IPS		15 IPS		7 1/2 IPS		15 IPS	
FREQ.	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
	DEMOD A							
	INCOMING LEVEL		+3.2 db		NOISE	-47.4		
700		DISTORTION		0,39%	@ 400Hz			
15K	-2.7							
12K								
10K	-1.4							
7.5K								
5.0K	-.4							
2.5K								
1.0K	0							
500	+.3							
250								
100	-.7							
50	-2.2							
30								

FREQ	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
	DEMOD B		INCOMING LEVEL			+3.7		
700			NOISE	-46.8		DIST.	0.43% @ 400Hz	
15K	-4.2							
12K								
10K	-2.1							
7.5K								
5.0K	-.8							
2.5K								
1.0K	0							
500	+.2							
250								
100	-1.1							
50	-2.8							
30								

NPR LINE PERFORMANCE TEST
(Form 2)

STATION CALL LETTERS__________ CITY____________________ DATE__________________

OPERATOR'S NAME____ TIME__________________

Incoming Program Level (400 Hz Tone):______________dBm

Total Harmonic Distortion: 400 Hz__________________ 100 Hz________________%

Frequency Sweep: 100 Hz-5000 Hz +_________ -______ dB Referred to 1000 Hz

FREQUENCY RESPONSE: (REFERRED TO 1000 Hz)

1000 Hz	+4.0 +4.6	550 Hz		1200 Hz		10K ~~3200~~ Hz	+2.6 +2.5
50	+1.8 +1.8						
100 Hz	+3.3 +3.5	600 Hz		1400 Hz		15K ~~3400~~ Hz	+1.3 +.4
150 Hz		650 Hz		1600 Hz		3600 Hz	
200 Hz		700 Hz		1800 Hz		3800 Hz	
250 Hz		750 Hz		2000 Hz		4000 Hz	
300 Hz		800 Hz		2200 Hz		4200 Hz	
350 Hz		850 Hz		2400 Hz		4400 Hz	
400 Hz		900 Hz		2600 Hz		4600 Hz	
450 Hz		950 Hz		2800 Hz		4800 Hz	
500 Hz	+4.3 +4.8	1000 Hz	+4.1 +4.6	3000 Hz		5000 Hz	+3.6 +3.8

COMMENTS____

____

____

Trouble Ticket No.__________________ AT&T Operator___________________________

Date________________________________

BUD CV-2106

CMSS
CONCERT MUSIC SATELLITE SYSTEM, INC.

September 25, 1985

IMPORTANT

Due to a manufacturing error, the proms we sent you on September 3, 1985 were mis-programmed.

If you already installed them, please discard them and replace with the attached proms.

If you have not as yet installed the proms sent on September 3, please throw them away and install the attached pair.

Please refer to the instruction manual we sent you; this replacement should take less than two minutes.

If you have already sent in your letter registering your demods for depot support, it is not necessary to do that again. However, if you have not sent that letter to NPR and CMSS, please don't forget to do so.

CMSS channels will be fully activated on October 21, 1985. Test tone is now on the channel for most hours of each day.

We apologize for the inconvenience and look forward to a successful relationship.

If you have any questions, please contact **Dennis Miller at WCLV (216) 241-0900**. All activity on these channels is being coordinated by Dennis.

Sincerely,

Peter Besheer
President

PB:jt

encl:

271 Madison Avenue, New York, N.Y. 10016 (212) 532-1900

DACS TRANSMISSION TIME: 17-Sep-85   12:23:31 EASTERN TIME

MESSAGE # 0917D0.009
TO: ALL STATIONS
FM: NPR DISTRIBUTION/ JIM McEACHERN
DT: SEPT 17, 1985
RE: MODIFIED COASTCOM DEMODULATORS FOR CMSS SERVICE

SATELLITE SYSTEM STATIONS ARE ONCE AGAIN GOING THROUGH THE THROES OF MODIFYING DEMODS SO THAT THEY MAY RECEIVE PROGRAMMING FROM CONCERT MUSIC SATELLITE SYSTEM. THERE IS A GREAT DEAL OF CONFUSION REGARDING WHO IS RESPONSIBLE FOR WHAT IN THE MAINTENANCE OF MODIFIED DEMODS. I HOPE THE FOLLOWING WILL HELP CLARIFY THE SITUATION.

1) DEMODULATORS THAT ARE MODIFIED FROM THE ORIGINAL 12 CHANNEL CONFIGURATION ARE NO LONGER COVERED BY THE NORMAL NPR MAINTENANCE DEPOT POLICY.

2) THE AGREEMENT THAT CMSS HAS ENTERED INTO WITH NPR PROVIDES FOR MAINTENANCE OF TWO (2) MODIFIED DEMODS, PROVIDED THEY ARE REGISTERED WITH BOTH NPR AND CMSS. CMSS HAS STATED THAT THEY WILL SELL ADDITIONAL ROMS TO STATIONS AS A COURTESY, BUT THAT CMSS WILL BE RESPONSIBLE FOR THE MAINTENANCE OF ONLY TWO DEMODS. THIS MEANS THAT:

   A. THOSE TWO SPECIFIC DEMODS MUST BE REGISTERED, BY SERIAL NUMBER, WITH BOTH CMSS AND NPR, FOLLOWING THE PROCEDURES SPECIFIED BY CMSS.
   B. IF YOU MODIFY MORE THAN TWO DEMODS, YOU ARE RESPONSIBLE FOR THE MAINTENENCE OF THE DEMODS THAT ARE NOT REGISTERED.

3) CMSS IS REQUIRING A NEW REGISTRATION OF MODIFIED DEMODS, FOR WHICH THEY WILL ASSUME MAINTENANCE RESPONSIBILITY. DEMODS THAT WERE REGISTERED LAST DECEMBER ARE NO LONGER CONSIDERED REGISTERED. EVEN IF YOU ARE RE-MODIFYING THE SAME TWO DEMODS, TO BE CONSIDERED CURRENTLY REGISTERED. YOU MUST AGAIN SEND THE SERIAL NUMBERS OF THE TWO DEMODS

ON THE APPROPRIATE FORM TO BOTH CMSS AND NPR. THE WORDING IS IDENTICAL ON THE REGISTRATION LETTERS FROM BOTH LAST DECEMBER AND THE PRESENT "NEW" REGISTRATION. YOU CAN DIFFERENTIATE THE TWO LETTERS FROM THE DATE LINE AT THE TOP OF THE LETTER; THE "OLD" REGISTRATION FORM HAS THE DATE "DECEMBER 12, 1984" PRINTED ON THE FORM, WHILE THE "NEW" REGISTRATION FORM HAS AN OPEN DATE LINE WHICH MUST BE FILLED IN.

4) AT THE PRESENT TIME, THE NPR SATELLITE REPAIR DEPOT DOES NOT HAVE ANY DEMODS THAT ARE MODIFIED FOR THE NEW FREQUENCIES THAT CAN BE USED AS "FLOAT" UNITS. WE ANTICIPATE RECEIPT OF NEW ROMS FROM CMSS SOON, WHICH WILL MAKE THE "FLOAT" UNITS AVAILABLE, BUT UNTIL THAT TIME WE WILL FOLLOW THIS PROCEDURE:

A. IF A MODIFIED DEMOD REQUIRES SERVICE, IT MUST BE REGISTERED TO RECEIVE SERVICE UNDER THE TERMS OF THE AGREEMENT BETWEEN CMSS AND NPR.

B. UPON NOTIFICATION OF A PROBLEM WITH A REGISTERED DEMOD, THE SATELLITE REPAIR DEPOT WILL SHIP A STANDARD 12-CHANNEL DEMOD TO THE STATION REQUESTING SERVICE. THE STATION RETURNS THE INOPERATIVE MODIFIED DEMOD TO THE DEPOT FOR SERVICE. WHEN REPAIRS ON THAT DEMOD ARE COMPLETED, IT WILL BE RETURNED TO THE STATION, WHICH WILL THEN RETURN THE "LOANER" 12-CHANNEL DEMOD TO THE DEPOT. AS WITH ALL DEPOT TRANSACTIONS, NPR PAYS THE FREIGHT FROM NPR TO THE STATION, AND THE STATION PAYS THE FREIGHT FROM THE STATION TO NPR.

5) WHEN THE DEPOT HAS "FLOAT" UNITS AVAILABLE WITH THE ROMS FOR THE NEW FREQUENCIES, UPON NOTIFICATION OF A PROBLEM WITH A REGISTERED DEMOD, THE DEPOT WILL SHIP A MODIFIED "FLOAT" UNIT TO THE STATION, WHICH WILL THEN SHIP THE INOPERATIVE UNIT TO THE DEPOT (IE. NORMAL DEPOT "SWAPOUT" PROCEDURE). NO FURTHER SHIPMENTS WILL BE REQUIRED.

PLEASE FEEL FREE TO CONTACT ME IF YOU HAVE QUESTIONS REGARDING THESE PROCEDURES.

END --

DACS TRANSMISSION TIME: 17-Sep-85   12:24:56   EASTERN TIME

MESSAGE # 0917D0.010

TO: ALL STATIONS, PGM DIRECTORS
FR: WINSTEAD/DISTRIBUTION
DT: SEPTEMBER 10, 1985
RE: EPS MARKETPLACE/PROMOS

THE FOLLOWING PROMOS WILL BE FED ON THE EPS MONO PROMO FEED ON THURSDAY, SEPTEMBER 19, AT 1215 ET AND 2215 ET ON CHANNEL 1.

CMSS AND NPR. THE WORDING IS IDENTICAL ON THE REGISTRATION LETTERS FROM BOTH LAST DECEMBER AND THE PRESENT "NEW" REGISTRATION. YOU CAN DIFFERENTIATE THE TWO LETTERS FROM THE DATE LINE AT THE TOP OF THE LETTER; THE "OLD" REGISTRATION FORM HAS THE DATE "DECEMBER 12, 1984" PRINTED ON THE FORM, WHILE THE "NEW" REGISTRATION FORM HAS AN OPEN DATE LINE WHICH MUST BE FILLED IN.

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DACS TRANSMISSION TIME: 17-Sep-85   12:24:56 EASTERN TIME

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FR: WINSTEAD/DISTRIBUTION
DT: SEPTEMBER 10, 1985
RE: EPS MARKETPLACE/PROMOS

THE FOLLOWING PROMOS WILL BE FED ON THE EPS MONO PROMO FEED ON THURSDAY, SEPTEMBER 19, AT 1215 ET AND 2215 ET ON CHANNEL 1.

DACS TRANSMISSION TIME: 16-Oct-85   13:49:27 EASTERN TIME

MESSAGE # 1016D0.009

To: All Stations, Chief Engineers, Operations Managers
Fr: Greg Monti, NPR Satellite Depot, 202-822-2650
Dt: 16 October 1985
Re: Buying additional demodulators

The Maintenance Depot frequently receives requests for information on how (and from where) to order additional demodulators for their downlink earth stations. Coastcom, the company that provided the original demodulators, has sold its demodulator business to a group of its ex-employees called Tectan. Their address is:

Tectan, Inc.
1820 North Arnold Industrial Way
Concord, CA   94520
415-798-2222
contact: Bill Leasey

412-basic demodulators (12- or 16-channel) are $1825 each (for the 12-channel version, please specify "NPR frequency plan;" you must specify what frequencies the additional four channels are if you are ordering a 16-channel version).

412-360 demodulators (can receive any frequency in the transponder but cannot be remote controlled by the Netcue system or by the Rockwell landline remote control systems some stations have) are $1800 each.

412 demodulator shelf (holds up to four demods) is $460.

412 power supply (powers one shelf worth of demods) is $575.

Read-only Memory (ROM) chips, programmed for any frequency plan you wish, are $60 per ROM and fit in the 412-basic demods.

16-channel demods, or 12-channel demods modified for 16 channels are not supported by the Maintenance Depot except through the registration program handled by Concert Music Satellite System, which is limited to two modifed demods per station.

Another alternative is the use of Microdyne's model 1100-PCDR-5 demod, which receives any frequency in the transponder (front panel thumbwheel tunable, cannot be remote controlled) and is also front-panel switchable between wide and narrowband channel formats, between 0, 25, 50 and 75 microseconds de-emphasis, between 5 and 7.5 kHz audio in narrowband mode and between 3:1 and 2:1 noise reduction. 1100-PCDR-5 demods are about $1700 each, which includes power supply (no "shelf" is used, it's rack-mountable, one unit tall) from:

Microdyne Corporation
PO Box 7213 or 491 Oak Road
Ocala, FL   32672-9990
904-687-4633
contact: Thomas Kidd

Prices above may be out of date, please call the factories for exact quotes.

END--

DACS TRANSMISSION TIME: 25-Sep-85 10:51:29 EASTERN TIME

MESSAGE # 0925D0.008
TO: ALL STATIONS
FR: WCLV, WFMT, WCRB VIA K. WINSTEAD, DIST
RE: CONTINUED NPR SATELLITE SERVICE
DT: SEPT. 25, 1985

PLEASE BE ADVISED THAT THE PROGRAMMING SERVICES YOU CURRENTLY RECEIVE FROM US VIA SATELLITE ON THE NPR CHANNELS WILL CONTINUE INDEFINETLY.

ANY CHANGES OR ANNOUNCEMENTS CONCERNING OUR SATELLITE DISTRIBUTION SERVICES OR POLICIES, WILL ORIGINATE DIRECTLY FROM US.

THANK YOU.

******
END/WJ

DACS TRANSMISSION TIME: 25-Sep-85 11:16:35 EASTERN TIME

END---

WCLV CLEVELAND'S FINE ARTS STATION

95.5 FM/STEREO
PENTHOUSE EAST
THE TERMINAL TOWER
CLEVELAND, OHIO 44113

TO: All subscribers of WCLV, WFMT & WCRB
RE: Time Table for activation of new channels
FR: WCRB, WCLV & WFMT

Here is a quick glance at the time table which will be followed during the transition period between our use of the lower NPR channels and the new CMSS channels.

1) Beginning now and continuing through October 20th, the new channels will continue to be tested and, at times, programming will be part of the testing procedure.

2) Beginning October 21st and continuing through November 3, we will provide duplicate feeds of all of our programs.

   For the lower NPR channels, this service will be identical to the one currently in place, i.e. the distribution schedule remains the same as does the channel assignments and support services.

   For the new CMSS channels, please use the new satellite distribution schedule. Although the majority of the programs will continue to be fed at the same time as the current NPR schedule, this new distribution schedule does differ from the current NPR schedule.

   Please familiarize yourself with this new schedule.

*** 3) Beginning November 4, the CMSS channels will be used exclusively for all programming currently distributed by us. (The only exception is WFMT's "Mozart Live".)

10/1/85
DLM

WCLV CLEVELAND'S FINE ARTS STATION

95.5 FM/STEREO
PENTHOUSE EAST
THE TERMINAL TOWER
CLEVELAND, OHIO 44113

OCT - 3 1985

October 1, 1985

TO: All subscribers of WCLV, WCRB & WFMT
FR: WCLV, WCRB & WFMT
RE: CMSS and the activation of the new satellite service

WCLV, WCRB, and WFMT constitute a consortium of major clients of the new Concert Music Satellite System (CMSS). CMSS leased Channels 13 and 14 (54.7 and 57.6) from National Public Radio in order to control the ever-increasing costs of program delivery and to assure the continuation of quality fine-arts programming to you at no cost, or for some programs, at the current rates.

Effective Monday, November 4, Channels 13 & 14 will be used exclusively for all programming currently distributed via satellite to NPR stations by WFMT, WCRB, & WCLV. (The only exception is WFMT's "Mozart Live".)

Your station has received the necessary proms and equipment in order to access the two new channels. It is important that your facilities be properly equipped and tested for receiving the new channels, and that you gain experience in downlinking these channels before November 4.

In order to facilitate this change over, we will provide duplicate feeds of all of our programs beginning Monday, October 21. For the lower NPR channels, this service will be identical to the one currently in place, i.e. the distribution schedule remains the same as does the channel assignments and support services.

For the new CMSS channels, please find enclosed a new satellite distribution schedule. As you will note, although the majority of the programs will continue to be fed at the same time as the current NPR schedule, this new distribution schedule does differ from the current NPR schedule.

Please note the differences and familiarize yourself with this new schedule. The new schedule will be in use exclusively beginning November 4.

Both schedules will be in use effective October 21. During this overlap in satellite distribution services, we encourage stations to use the new CMSS channels and to rely on the NPR channels for backup.

Cont'd

As noted in the new distribution schedule, programs will continue to be fed according to the current NPR Distribution formats, i.e. multiple reel programs will be fed in the same configuration, et al. All feeds will continue to be synchronized with the NPR clock in Washington, D.C. Therefore, programs fed on the NPR channels and programs fed on the CMSS Channels will start at the same time.

Enclosed you will find information on the tone activation system which will be used to start tape recorders at your stations. There is additional information about the use of VCR machines to tape programs from the satellite.

We are appealing to NPR to allow us continued use of DACS to deliver your cue sheets and scheduling information. For the moment, however, this information will be supplied by mail by the program's syndicator.

Beginning now and continuing through October 20th, the new channels will continue to be tested and, at times, programming will be part of the testing procedure.

Here is who to call in case you have any questions:

Delivery of equipment:		Dennis Miller	(216) 241-0900
Understanding of instructions on installation or use, technical engineering concerns:		Frank Murzynski Basil Penzone	(216) 564-9093 (216) 564-9093
Distribution information and scheduling of satellite time:		Dennis Miller	(216) 241-0900
Program Services:	WFMT	Kathleen Jenkins	(312) 565-5000
	WCRB	John Emery Mary Rodman	(617) 893-7080 (617) 893-7080
	WCLV	Dennis Miller	(216) 241-0900

If you do not contact us, we will assume you will be ready to access our programming through CMSS as of November 4.

We look forward to providing you a more substantial, efficient and stable service than ever in the years ahead, and we appreciate your cooperation.

WFMT, Chicago   WCLV, Cleveland   WCRB, Boston

Prepared by Dennis L. Miller

600 ET	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
600							
700							
800							
900	"AIGM"	"AIGM"	"AIGM"	"AIGM"	"AIGM"		
1000	Cleveland Inst of Music	Weekend Radio	Micrologus Aud. Organ	Music from Oberlin	Music from Interlochen		
1100	"AIGM"	"AIGM"	"AIGM"	"AIGM"	"AIGM"		
1200	Philadelphia Orchestra	Cleveland Orchestra	New York Philharmonic	Chicago Symphony	Cleveland Orchestra		
1300	R 1 1205-1309 R 2 1310-1414	R 1 1205-1309 R 2 1310-1414	R 1 1205-1309 R 2 1310-1414	R 1 1205-1309 R 2 1310-1414	R 1 1205-1309 R 2 1310-1414	Music in America	
1400	- - - - - - - - Confer. Call	- - - - - - - - Confer. Call	- - - - - - - - Confer. Call	- - - - - - - - Confer. Call	- - - - - - - - Confer. Call	Canadian Opera	Audiophile Audition
1500	Stud's Almanac	Stud's Wax Museum	A.T.&.T. Carnegie Hall	Folk Stage - - - - - - - -	City Club Forum	Start 10/19	
1600	International Festival	Detroit Symphony	San Francisco Symphony		International Festival	to	
1700	R 1 1605-1709 R 2 1710-1814	R 1 1605-1709 R 2 1710-1814	R 1 1605-1709 R 2 1710-1814		R 1 1605-1909 R 2 1710-1814	1800 +or-	
1800	- - - - - - - -	- - - - - - - -	Start 1/86		- - - - - - - -		
1900							
2000		Baldwin Wallace Start 1/86	Music in America		San Francisco Symphony	Weekend Radio	
2100		Philadelphia Orchestra	Chicago Symphony		R 1 2005-2109 R 2 2110-2214	Folk Stage - - - - - - - -	
2200		to 2300 +or-	to 2300 +or-		Start 1/86		
2300							
0000							

PINZONE COMMUNICATIONS PRODUCTS, INC.
10142 FAIRMOUNT RD., NEWBURY, OHIO U.S.A. 44065

MODIFICATION PROCEDURE

FOR

COASTCOM MODEL 412 DEMODULATOR

PINZONE ENGINEERING
12/10/84

PINZONE COMMUNICATIONS PRODUCTS, INC.
10142 FAIRMOUNT RD., NEWBURY, OHIO U.S.A. 44065
304-296-4493

MODIFICATION PROCEDURE

FOR

COASTCOM MODEL 412 DEMODULATOR

1) Remove power from demodulator shelf.

2) Remove demodulator from shelf and place it on bench with printed circuit side up. At this time, look at the four (4) rear screws. Note that the washers under the screws do not touch any printed circuit runs. This is important when reassembling the demodulator. Remove the four rear screws holding the printed circuit board, leave front two screws intact. (See figure No. 1)

3) Holding the two sides of the demodulator together, turn the demodulator over and remove the two screws holding the metal plate to the front panel. (See figure No. 2) Note: Screws have nut and flat washer.

4) With front panel facing to the right, and printed circuit side of the demodulator down against the bench, slide the metal plate back slightly and fold it over. (See figure No. 3)

5) Refer to figure No. 4 - Locate integrated circuit U5. With a thin bladed screwdriver or similar tool, gently pry U5 from its socket. Note the location of Pin "1" of integrated circuit U5.

5a) Remove the new integrated circuit U5 from its anti-static protection and insert it into the empty socket. Make sure that the new integrated circuit is oriented the same way as the integrated circuit that was removed. Refer to figure No. 5.

5b) Place the integrated circuit that was removed into the anti-static protection pad for storage.

6) Remove the thumbwheel switch from the front panel. It may be necessary to remove the two headset jacks before the switch can be removed. (See figure No. 6)

7) Two (2) U-Shaped clips hold the switch together. Refer to figure No. 7 - Gently pry these clips off. The switch will come apart into three (3) pieces.

- Continued -

Modification Procedure For Coastcom Model 412 Demodulator

8) Remove the two (2) side pieces of the switch. Holding the switch center section with the printed circuit side away and down from you, you will see two small silver colored pin heads. Using a razor blade, or thin knife blade, pry under the head of the pin and remove them. The thumbwheel should now rotate completely around showing all the numbers from zero through fifteen. Refer to figure No. 8.

9) Re-Assemble the thumbwheel switch.

9a) When remounting thumbwheel to front panel, you can use the red nut-starter tool to start bottom nut.

9b) When re-assembling demodulator, care should be taken to avoid pinching any wires. Note that one of the screws has a cut washer such that it will not touch an adjacent printed circuit run. (Refer to Figure No. 9)

In no case should a washer touch any printed circuit runs.

9c) After demodulator is completely re-assembled, check that the connectors are seated in their sockets. (Refer to Figures 10 and 11)

10) Installation of Demodulator Back Into Shelf -

! IMPORTANT !

Touch yourself first to the rack to discharge any static build-up. While holding onto rack, slide demodulator into its slot. (Refer to Figure No. 12)

Pinzone Communications Products, Inc.
12/10/84

IMPORTANT !!

IT IS IMPERATIVE NOT TO DISCHARGE ANY STATIC BUILDUP WHILE CARRYING OR MOVING THE DEMOD THROUGH THE DEMOD!!

GROUND AND DISCHARGE YOURSELF AND THE DEMOD AFTER WALKING ACROSS A CARPET BY TOUCHING THE RACK WITH YOUR HAND FIRST, BEFORE ALLOWING THE DEMOD TO COME IN CONTACT!!

FAILURE TO DO SO WILL RESULT IN SEVERE DAMAGE TO THE RECEIVER!!

THIS INCLUDES DISCHARGING YOURSELF BEFORE TOUCHING THE DEMOD WHEN PERFORMING THIS MODIFICATION!!

A SPECIAL HOTLINE HAS BEEN ARRANGED FOR YOUR CONVENIENCE.

ANY QUESTIONS SHOULD BE DIRECTED TO (216) 338-4494 FROM 9 A.M. TO 5 P.M. E.T.

DURING THE MONTH OF DECEMBER AND THE FIRST WEEK OF JANUARY, THE NUMBER WILL BE FORWARDED AND ANSWERED AFTER HOURS BY AN ON-CALL ENGINEER AT HOME.

WE ARE AWARE THAT MANY OF YOU PERFORM ROUTINE MAINTENANCE ON SUNDAY NIGHT THROUGH MONDAY MORNING. CALLS WILL BE WELCOME AT THIS TIME.

THE HOTLINE WILL BE ANSWERED BY A MESSAGE CENTER FROM 6 P.M. DECEMBER 24 THROUGH 6 A.M. DECEMBER 26, AND FROM 6 P.M. DECEMBER 31 THROUGH 6 A.M. JANUARY 2, 1985.

MODIFICATION PROCEDURE
FOR
COASTCOM MODEL 412 DEMODULATOR

1) Remove power from demodulator shelf.

2) Remove demodulator from shelf and place it on bench with printed circuit side up. At this time, look at the four (4) rear screws. Note that the washers under the screws do not touch any printed circuit runs. This is important when re-assembling the demodulator. Remove the four rear screws holding the printed circuit board, leave front two screws intact. (See figure No. 1)

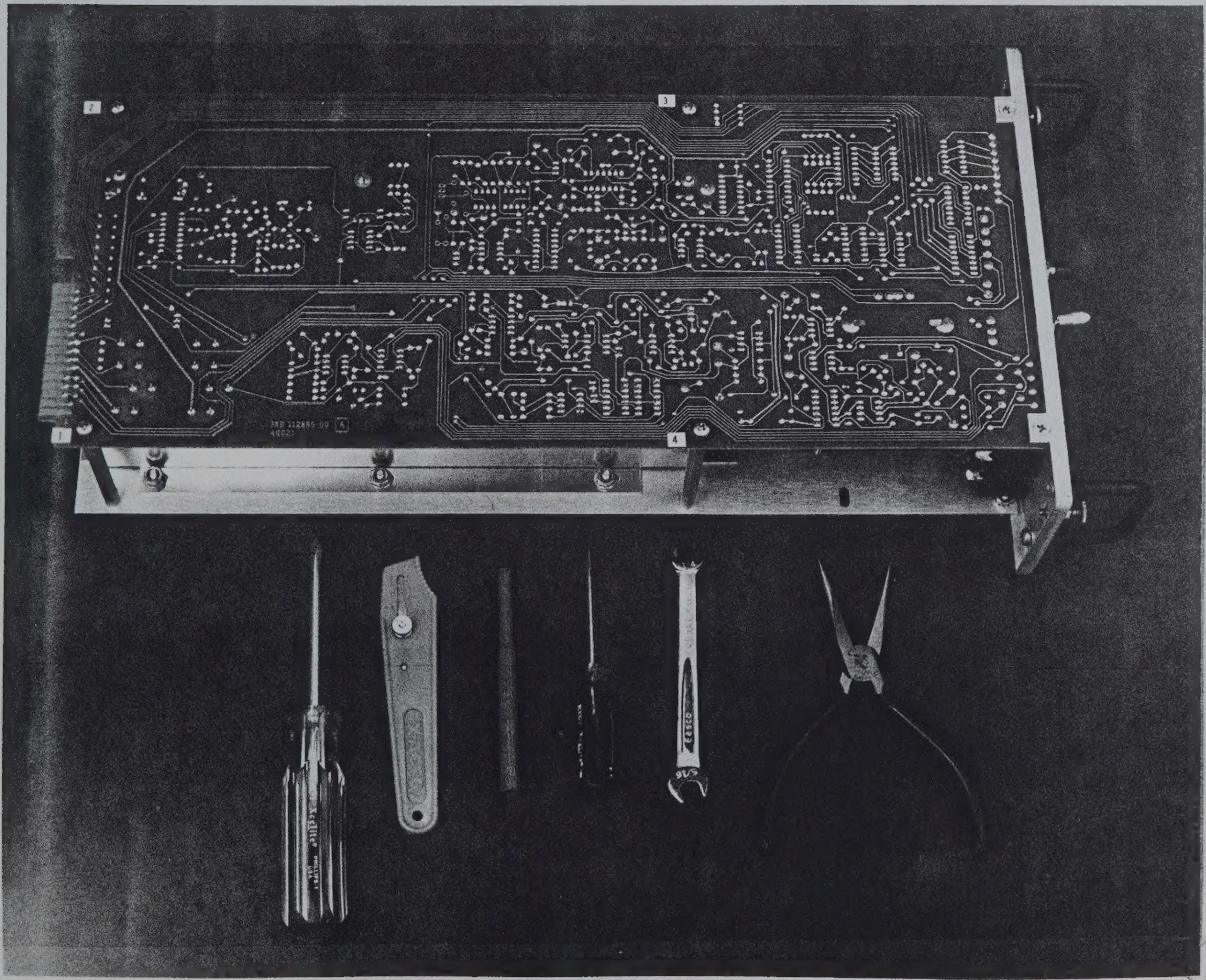

FIGURE NO. 1

3) Holding the two sides of the demodulator together, turn the demodulator over and remove the two screws holding the metal plate to the front panel. (See figure No. 2)
Note: Screws have nut and flat washer.

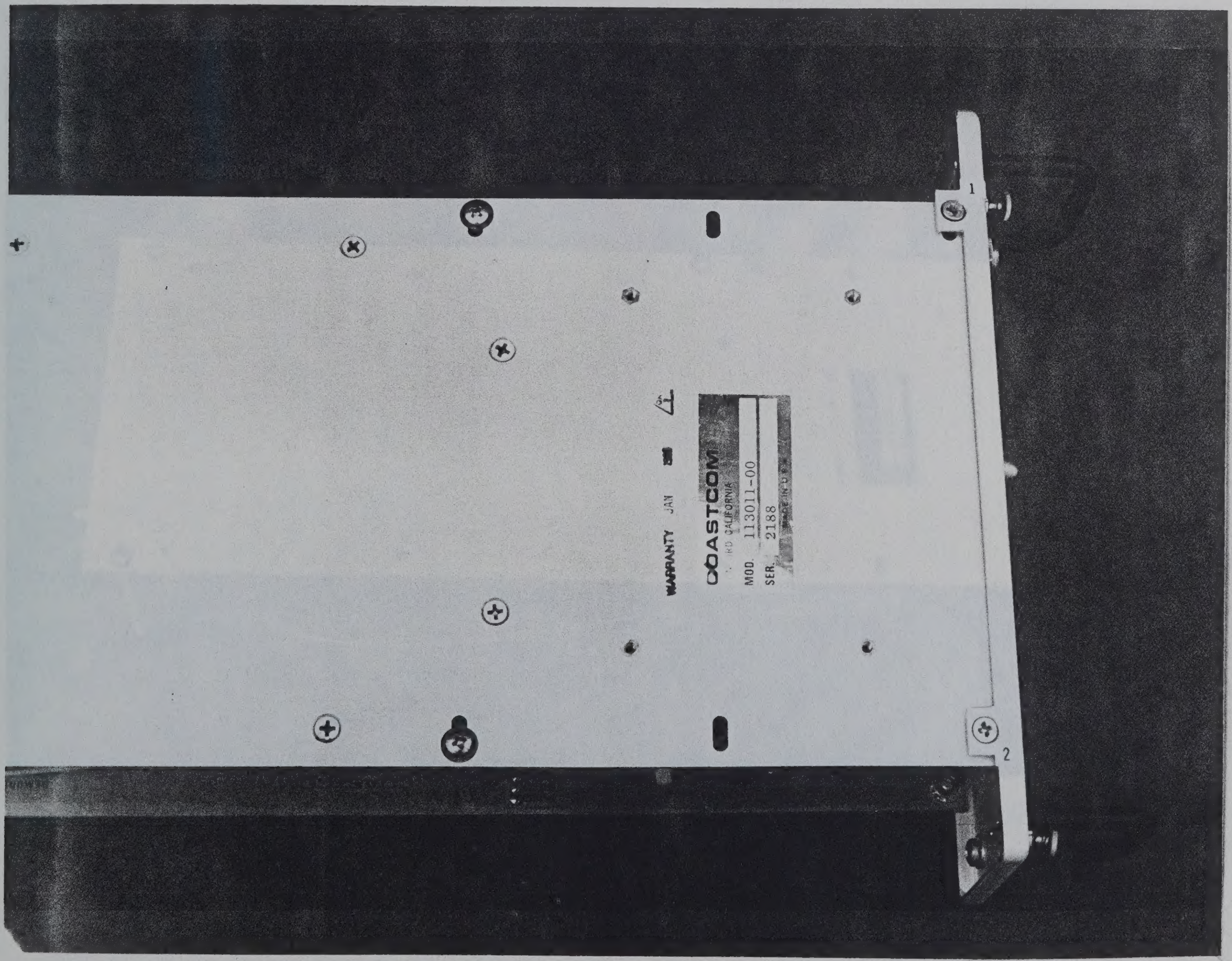
1
2
WARRANTY
JAN
COASTCOM
CALIFORNIA
MOD. 113011-00
SER. 2188
MADE IN U.S.A.

FIGURE NO. 2

4) With front panel facing to the right, and printed circuit side of the demodulator down against the bench, slide the metal plate back slightly and fold it over. (See figure No. 3)

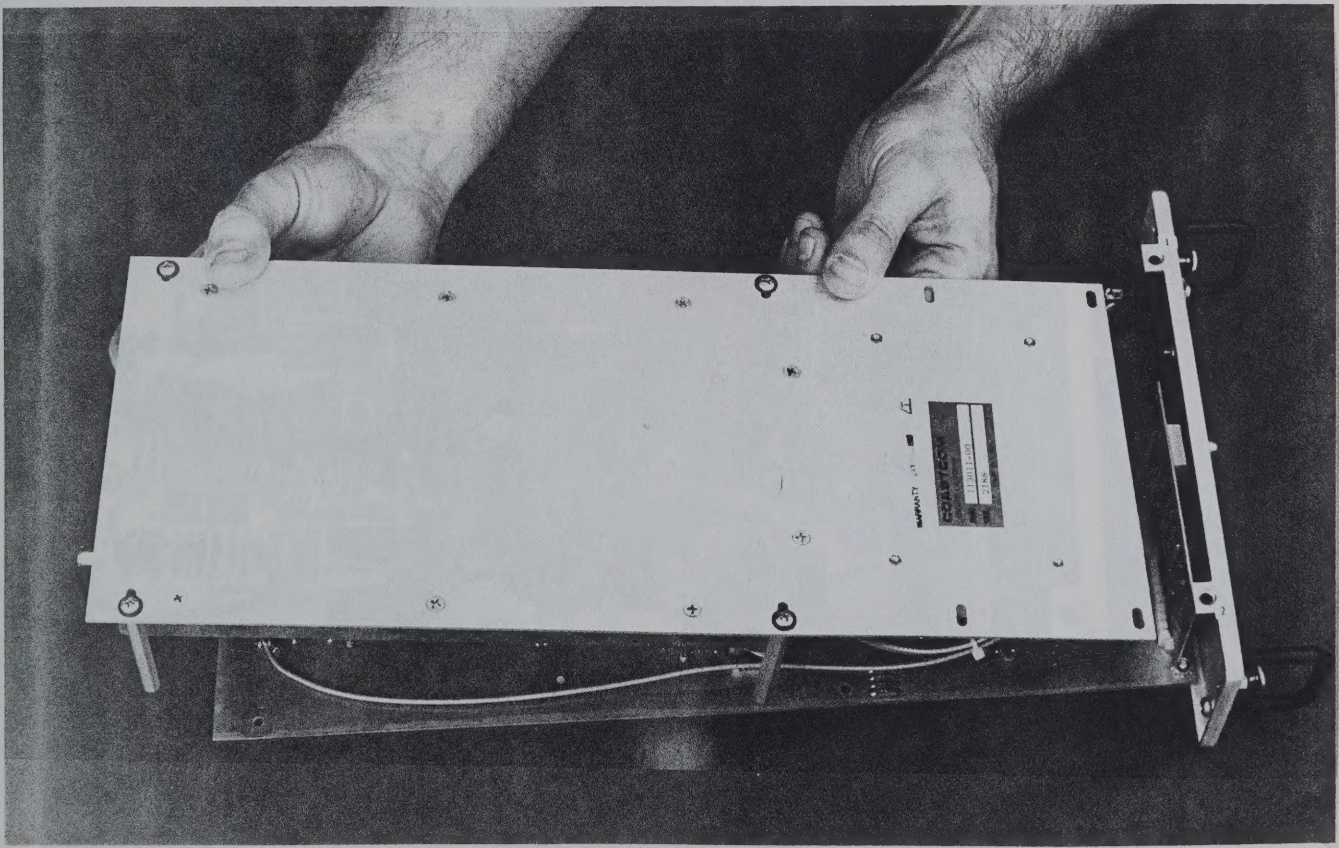

FIGURE NO. 3

5) Refer to figure No. 4 - Locate integrated circuit U5. With a thin bladed screwdriver or similar tool, gently pry U5 from its socket. Note the location of Pin "1" of integrated circuit U5.

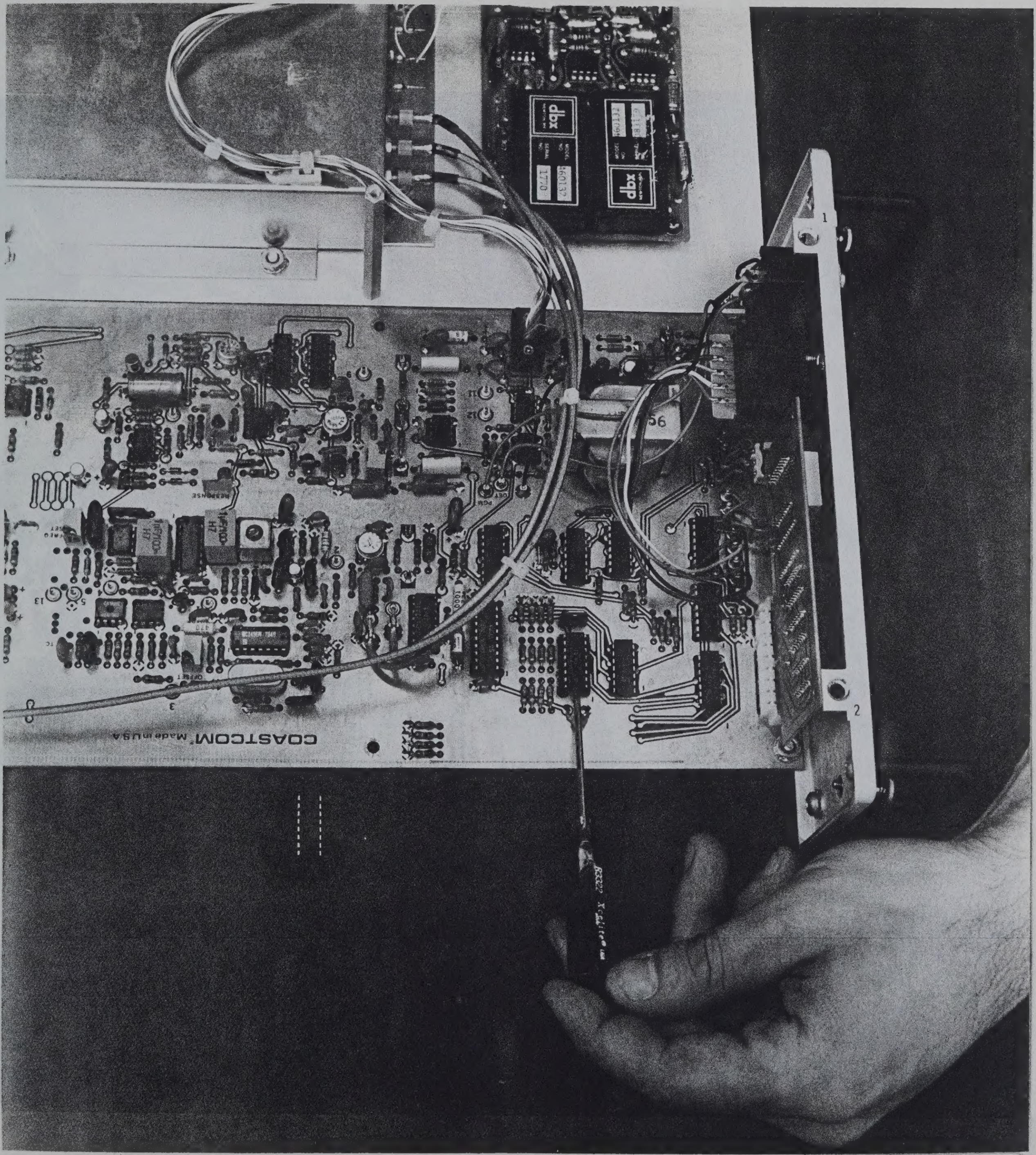

FIGURE NO. 4

5a) Remove the new integrated circuit U5 from its anti-static protection and insert it into the empty socket. Make sure that the new integrated circuit is oriented the same way as the integrated circuit that was removed. Refer to figure No. 5.

5b) Place the integrated circuit that was removed into the anti-static protection pad for storage.

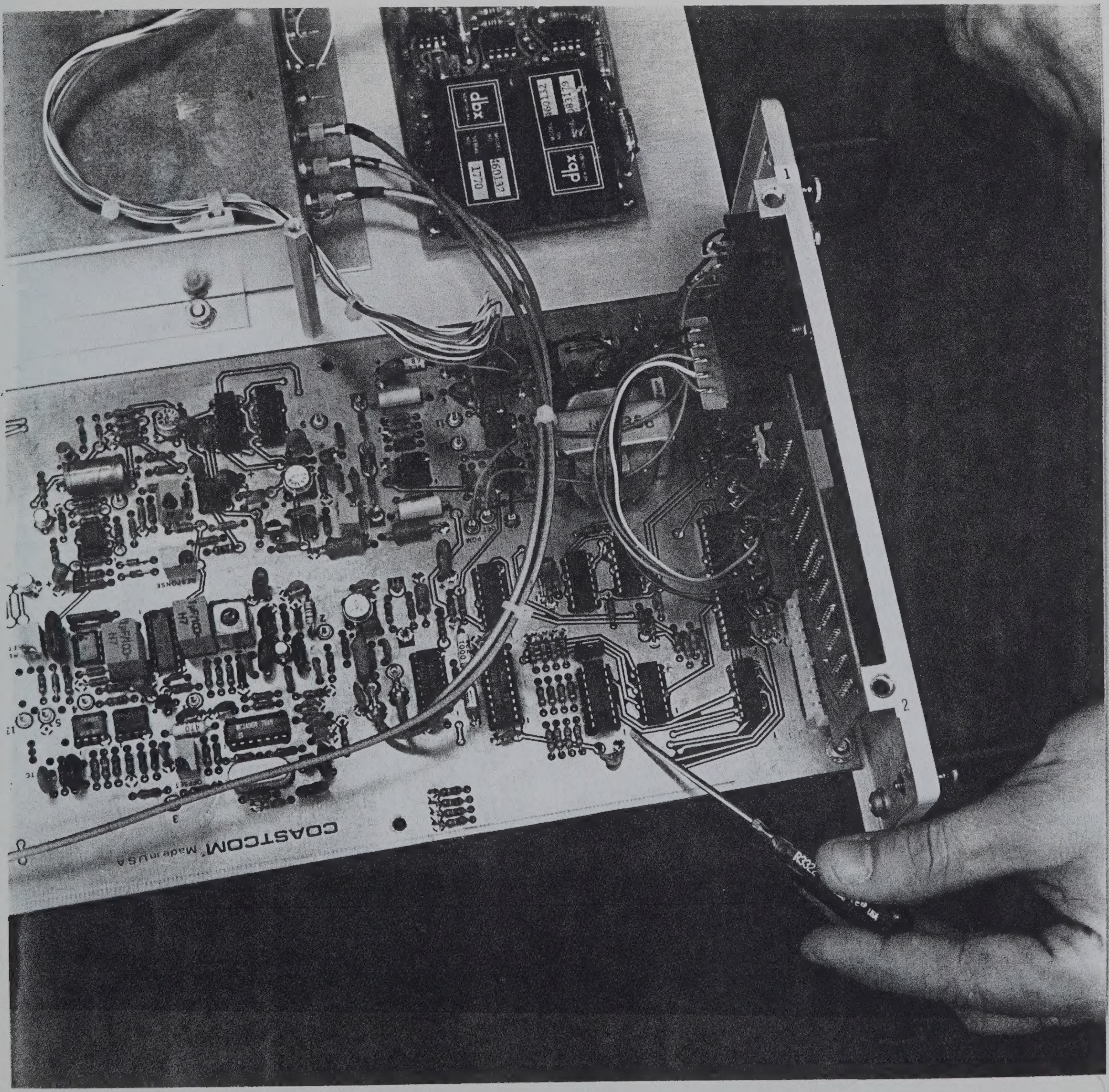

FIGURE NO. 5

6) Remove the thumbwheel switch from the front panel. It may be necessary to remove the two headset jacks before the switch can be removed. (See figure No. 6)

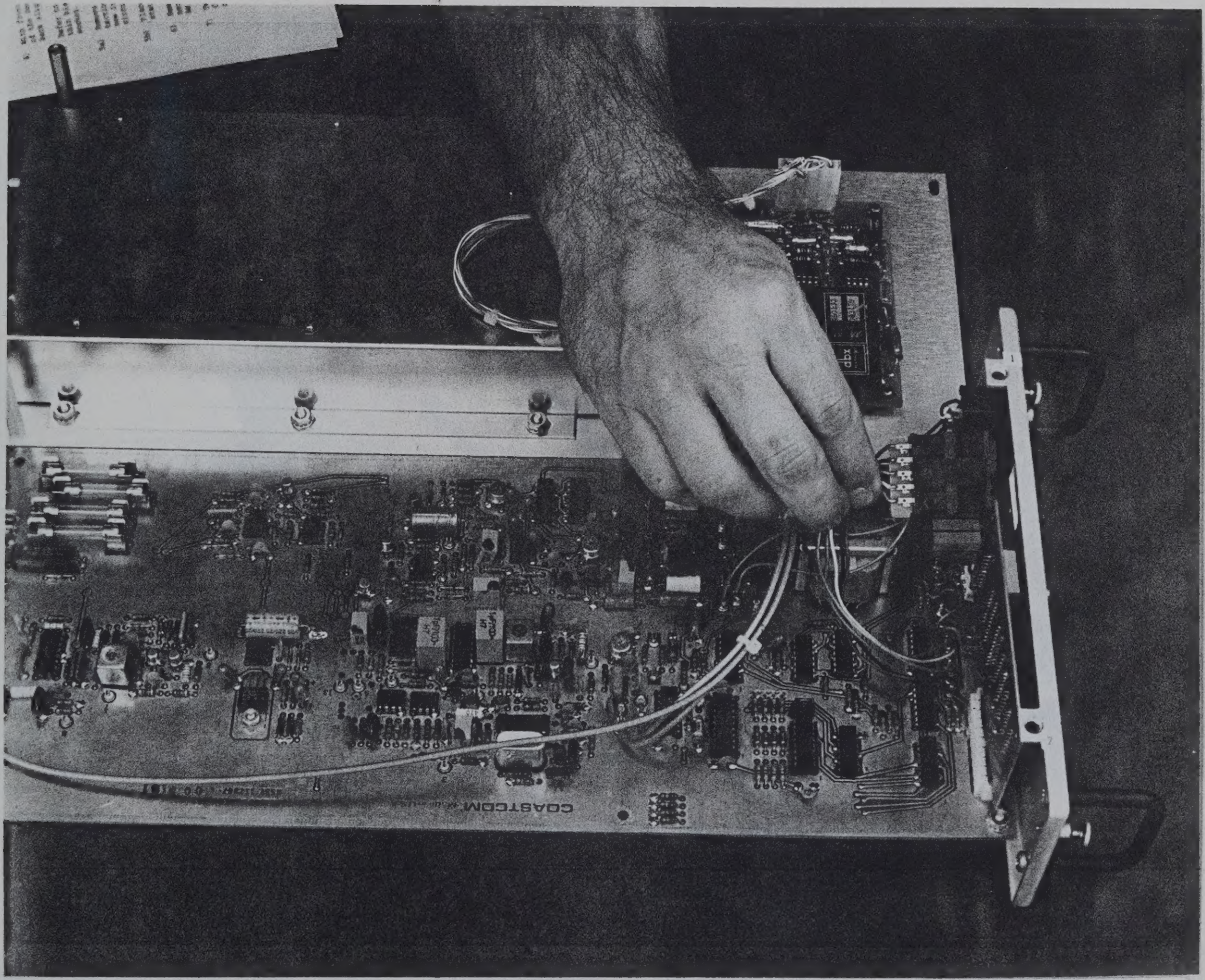

FIGURE NO. 6

7) Two (2) U-Shaped clips hold the switch together. Refer to figure No. 7 - Gently pry these clips off. The switch will come apart into three (3) pieces.

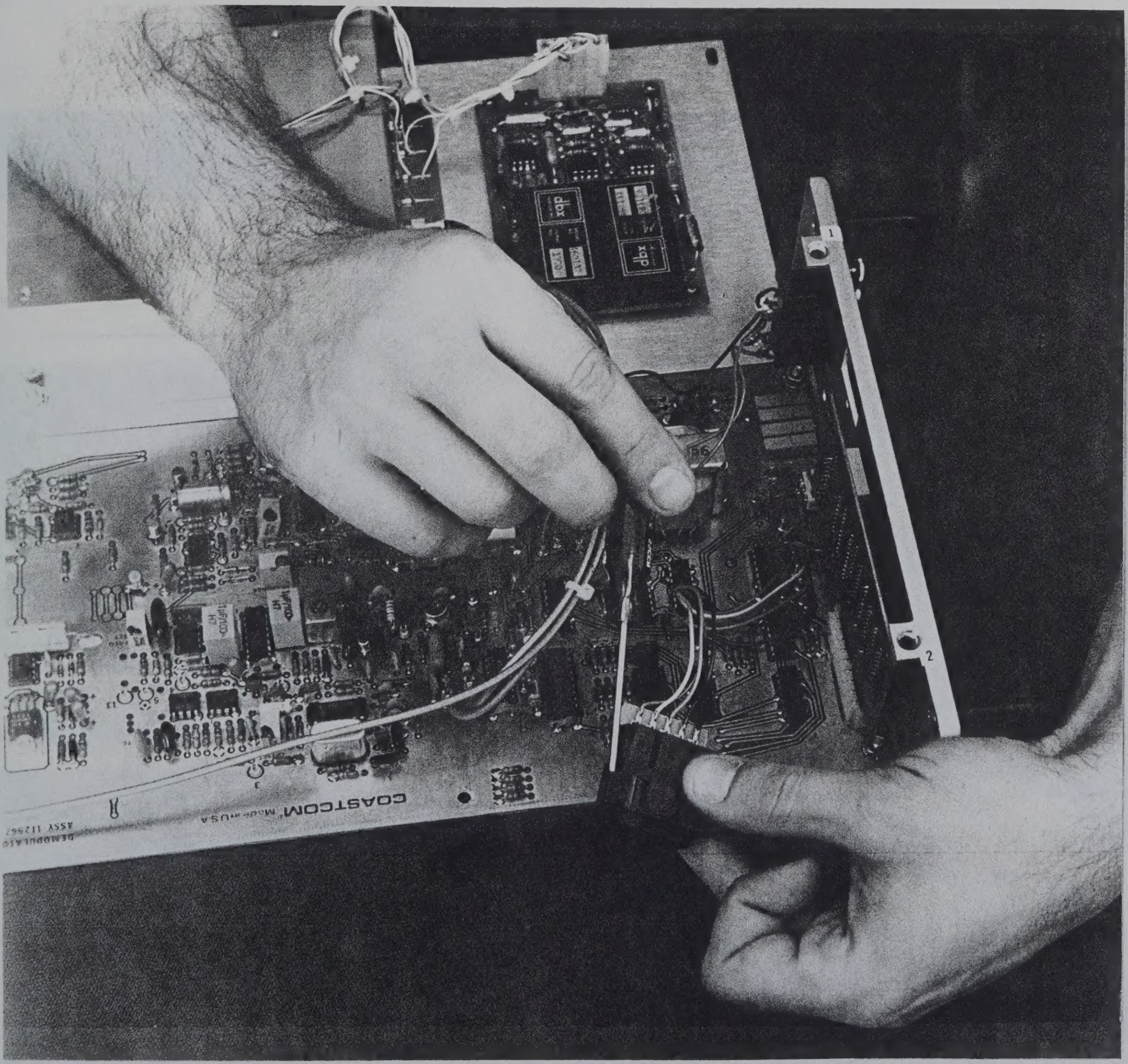

FIGURE NO. 7

8) Remove the two (2) side pieces of the switch. Holding the switch center section with the printed circuit side away and down from you, you will see two small silver colored pin heads. Using a razor blade, or thin knife blade, pry under the head of the pin and remove them. The thumbwheel should now rotate completely around showing all the numbers from zero through fifteen. Refer to figure No. 8.

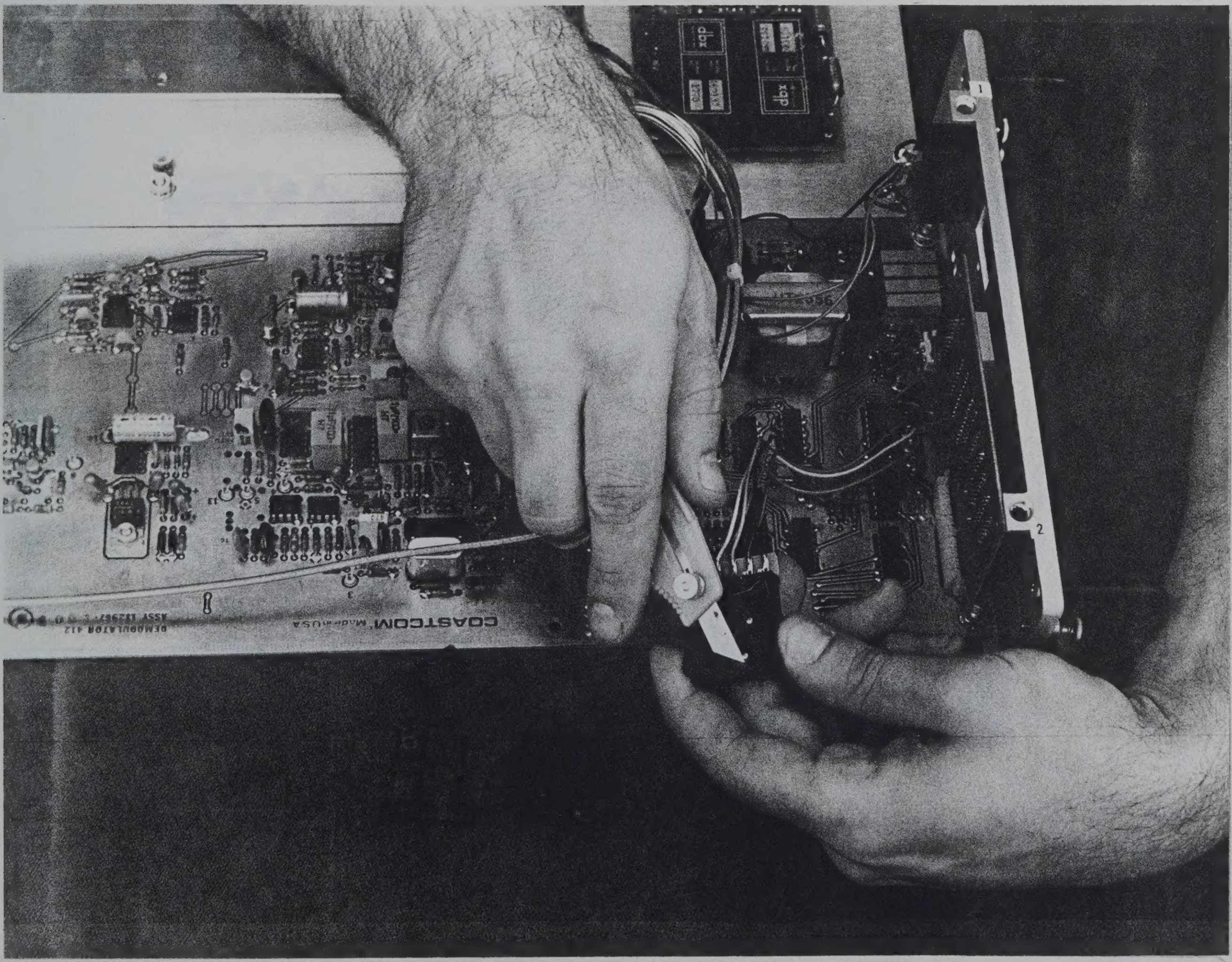
dbx
dbx
COASTCOM Made in USA
DEMODULATOR 412
1
2

FIGURE NO. 8

9) Re-Assemble the thumbwheel switch.

9a) When remounting thumbwheel to front panel, you can use the red nut-starter tool to start bottom nut.

9b) When re-assembling demodulator, care should be taken to avoid pinching any wires. Note that one of the screws has a cut washer such that it will not touch an adjacent printed circuit run. (Refer to Figure No. 9)

In no case should a washer touch any printed circuit runs.

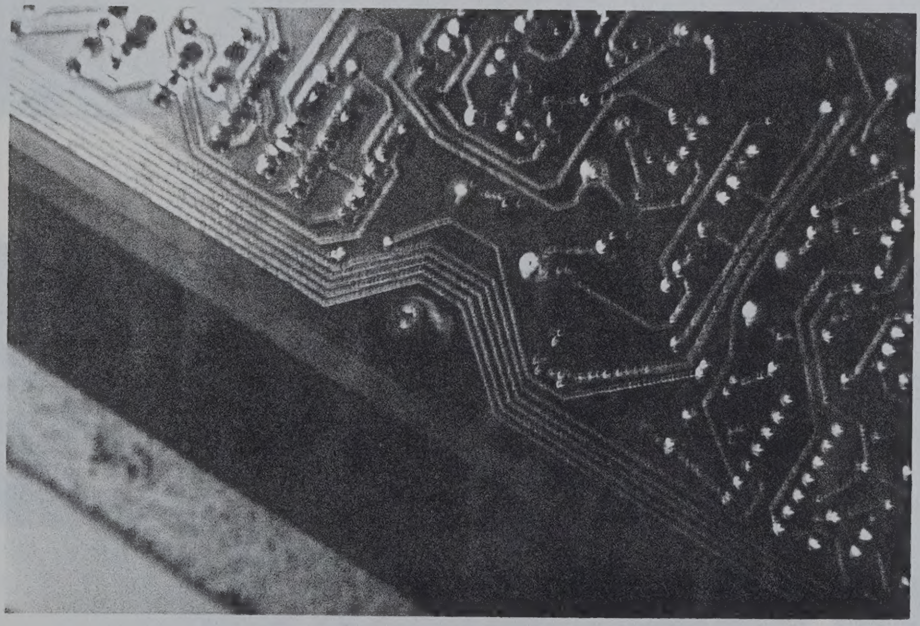

FIGURE NO. 9

9c) After demodulator is completely re-assembled, check that the connectors are seated in their sockets. (Refer to Figures 10 and 11)

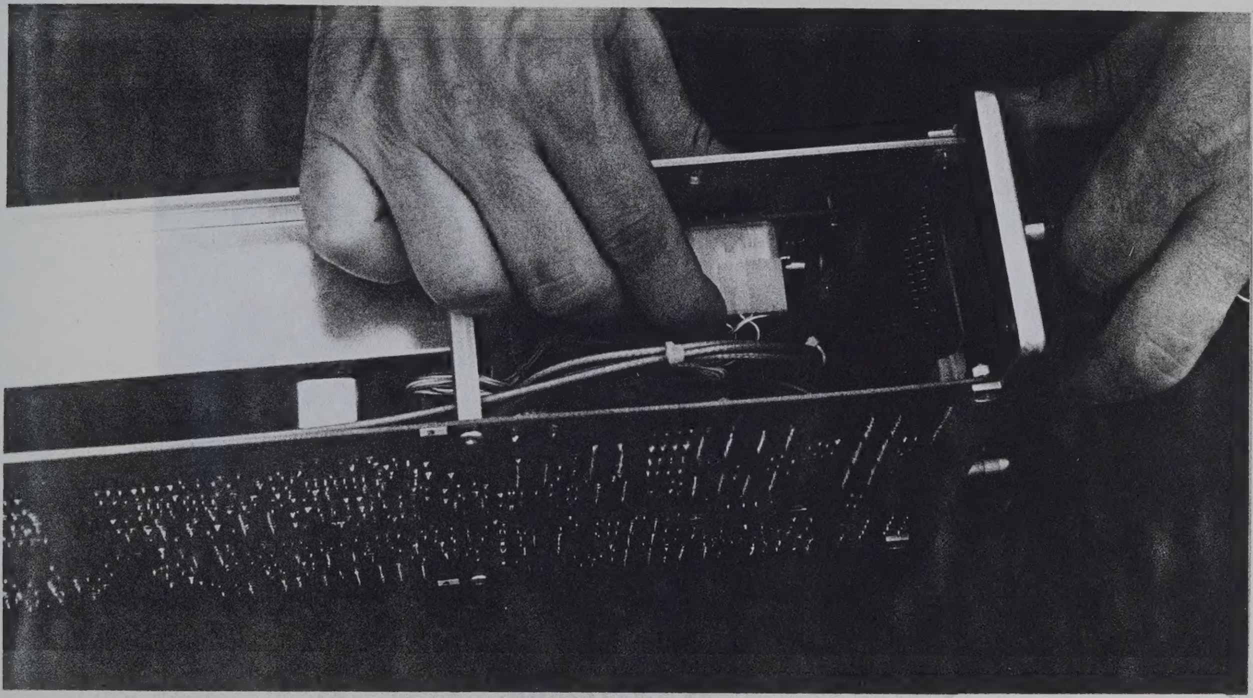

FIGURE NO. 10

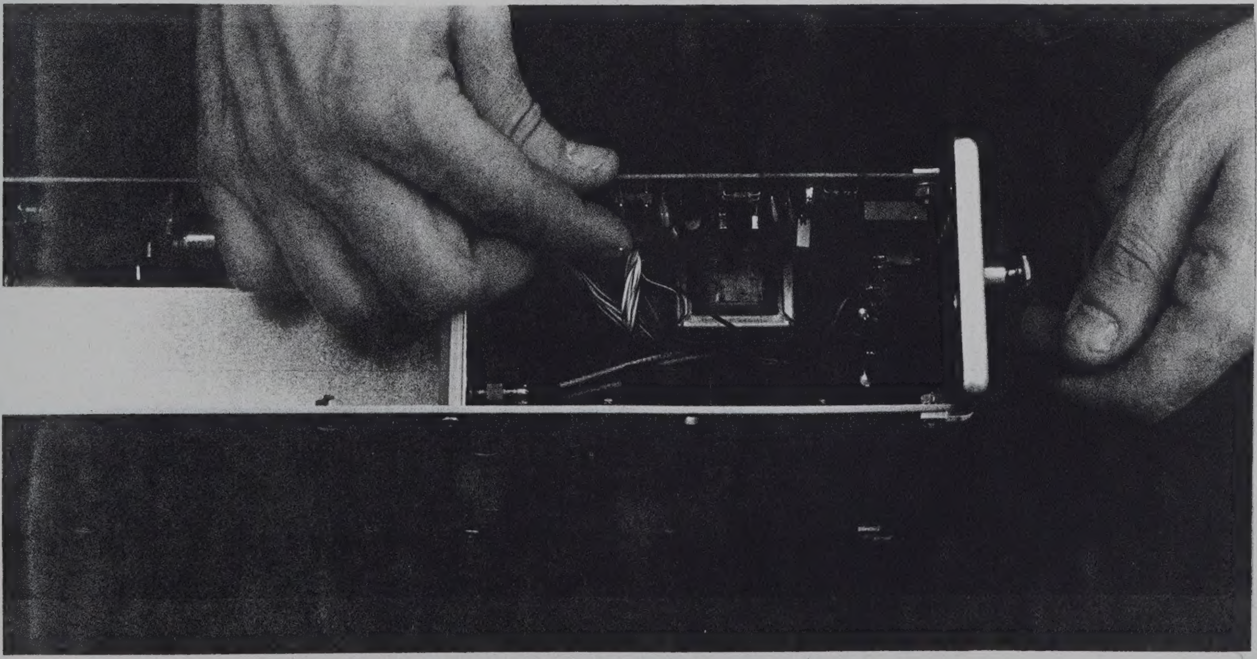

FIGURE NO. 11

10) Installation of Demodulator Back Into Shelf -

! IMPORTANT !

Touch yourself first to the rack to discharge any static build-up. While holding onto rack, slide demodulator into its slot. (Refer to Figure No. 12)

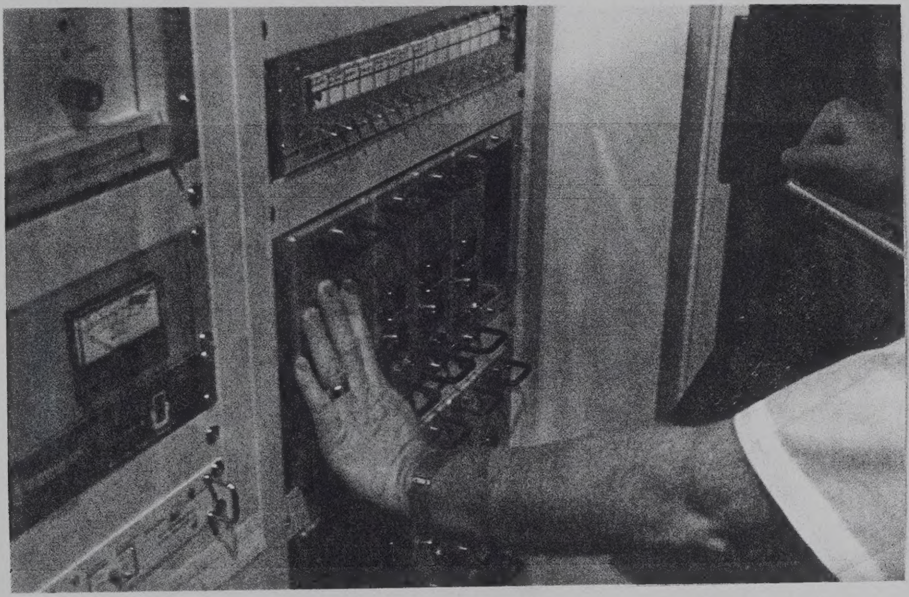

FIGURE NO. 12

IMPORTANT !!

IT IS IMPERATIVE NOT TO DISCHARGE ANY STATIC BUILDUP WHILE CARRYING OR MOVING THE DEMOD THROUGH THE DEMOD!!

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THIS INCLUDES DISCHARGING YOURSELF BEFORE TOUCHING THE DEMOD WHEN PERFORMING THIS MODIFICATION!!

COASTCOM

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